14 Gideon Drive and 2012 Oxford Street West

Environmental Impact Study

Project Location:
14 Gideon Drive & 2012 Oxford Street West, London, ON

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1.0 Introduction

1926767 Ontario Ltd, c/o Jon Aarts (the proponent) has initiated the planning process for a proposed combination of 39 single detached homes and a multi-family residential block on two parcels of land. While, the Legal Parcels are located at 14 Gideon Drive and 2012 Oxford Street West, London, ON, the area proposed for development (Subject Lands) is smaller and is limited to the north end of the parcel [Figure 1]. Life science data collection has been completed on the Subject Lands in 2018. This report compiles the updated data collection to reflect the current state of the Subject Lands. Also in this report are Sections providing a description of the development and impacts and mitigation. A discussion on the triggers for this EIS follow in Section 3.

1.1 Report Objective

This EIS report assesses the natural heritage features and functions, based on the life science data collected for this application along with additional studies (hydrogeological and geotechnical), also conducted specifically for the development proposal. Any additional pertinent background information from prior studies including the Secondary Plan (River Bend Community Plan, City of London, 2001).

The process and reporting is also designed to provide a support document to subsequent site alteration permit applications which may be submitted to the Upper Thames River Conservation Authority (UTRCA) if required.

1.2 Format

Natural heritage features and functions identified in this EIS are evaluated through a review of the Natural Heritage Reference Manual (NHRM, 2010) for policy 2.1 of the Provincial Policy Statement (MAH, 2014); and Section 15 of the City of London Official Plan (Office Consolidation, January 2015). The EIS will also follow the City of London Environmental Management Guidelines (2007).

The EIS contains the following components, in accordance with the standards noted above:

Section 2.0	Land Use Setting
Section 3.0	Triggers for EIS
Section 4.0	Description of the Natural Environment
Section 5.0	Natural Heritage Policy Considerations
Section 6.0	Description of Development
Section 7.0	Impacts and Mitigation
Section 8.0	Summary and Conclusions

1.3 Background Documents

The following existing data and studies were used to review the current environment.

- River Bend Community Plan (City of London, 2001).

1.4 Pre-Consultation

To date, pre-consultation has consisted of preliminary informal discussions with the City of London [Appendix A] and email correspondence from the City of London [Appendix B]. As well, an EIS scoping meeting was held June 2 2020 [Appendix B1].

As part of the pre-consultation checklist, the City has requested the components of a Subject Lands Status Report (SLSR) be included in the EIS. The request is unnecessary as an Environmental Impact Study provides the same information and analysis. Furthermore, the

reference to Subject Lands Status Report at all, does not conform to the City of London Official Plan policy

> 1425_ Where a secondary plan has not been completed the City may require the preparation of a subject lands status report. The work plan for the subject lands status report will be determined in consultation with the City and relevant public agencies. (London Plan, in force)

The Subject Lands are within the City of London Urban Growth boundary and within the Council approved (2004) River Bend Community Planning Area (City of London, 2001). Natural Heritage studies were completed as part of the Area Plan to guide the development of the River Bend Land Use Plan (City of London, 2001). This Community Plan lea to Official Plan amendments for this area and as a result, meets the definition of a Secondary Plan under the Planning Act

> "A secondary plan is a land use plan for a particular area of a municipality that is prepared as an amendment to an official plan. Typically, a secondary plan will provide more detailed policies for the area it covers, such as public spaces, parks and urban design." https://www.ontario.ca/document/citizens-guide-land-use-planning/official-plans

Therefore, according to, and consistent with Official Plan policy (see quotes above), an SLSR is **not** required and an EIS provides a similar natural heritage review and assessment.

Notwithstanding some additional disagreement on the need to revisit some aspects of the scoping checklist requirements issued by the City (many issues already considered in the Secondary Plan studies and OPA at that time), the EIS has been prepared to address this checklist.

2.0 Land Use Settings

The Legal Parcel is 19.73ha in size. However, only a portion is within the City of London Growth Boundary. Therefore, the proposed development within this growth boundary (referred to here as the Subject Lands), is a 5.4ha portion of the Legal Parcel. The remainder of the Legal Parcel will be retained for agriculture. The Subject Lands are located on 14 Gideon Drive and 2012 Oxford Street West, west of Westdel Bourne and east of Tote Road in the City of London. The Subject Lands are surrounded by agricultural lands [Figure 1].

The descriptions in this section are based on a review of the records available. The descriptions of the site based on field investigations are found in Section 4.0 - Description of the Natural Environment.

2.1 Environmental Designations

Guided by natural heritage studies in support of the Riverbend Community Plan, there are no environmental features identified by the City of London Official Plan within the Subject Lands [Figure 2] (City of London OP, Schedule B1, 2015). There is an unevaluated vegetation patch within the Legal Parcel, however this feature is approximately 380m south of the Subject Lands. An area of Ground Water Recharge transects most of the Subject Lands, save and except for the southeast corner. The Provincially Significant Dingman Creek Fen Wetland Complex is within 450m west of the Subject Lands [Figure 2].

Map 5 is under appeal in the London Plan.

2.2 Land Use Designations

Guided by the River Bend Community Plan, the Subject Lands and the majority of the adjacent lands were designated as Low Density Residential [Figure 3] (City of London OP, Schedule A, 2015). Furthermore, the Subject Lands are also designated as Neighbourhood on Map 1 of the London Official Plan (2019).

2.3 River Bend Community Plan

A Natural Heritage Study was completed as part of the River Bend Community Planning process (Secondary Plan). The Natural Heritage Study provided the framework for environmentally sensitive planning for the future development of the River Bend Area (City of London, 2001), and the City of London Official Plan schedules as noted above. Three phases of natural heritage reporting, including an EIS, provided input to the development of the Ecological Management Plan (City of London, 2001). The plans did not any features on the Subject Lands. The Land Use designation of the Official Plan (London, 2015) and the London Plan (partially under appeal) is consistent with the River Bend Community Plan [Figure 4].

An Official Plan amendment is not needed.

2.4 Zoning Bylaws

The Subject Lands are zoned Urban Reserve [Figure 4]. The remainder of the Legal Parcel is zoned Agriculture and Environmental Review. The Urban Reserve zone extends to the east along Oxford St beyond the Subject Lands [Figure 5].

A zoning by-law amendment is proposed to bring the lands into conformity with the Official Plan.

2.5 Upper Thames River Conservation Authority (UTRCA) Regulation

There are no UTRCA regulated areas within the Subject Lands. There is a small wetland feature over 150m to the south of the Subject Lands within the Legal Parcel [Figure 5].

3.0 Triggers for EIS

When a development proposal requires a Planning Act application (i.e. Draft Plan submission, or amendments to the Official Plan and/or zoning by-law), the City of London requires an Environmental Impact Study (EIS).

With a requirement to bring the zoning of the lands into conformity with the City of London Official Plan land use schedules (Schedule A), triggers for the Environmental Impact Study are as follows:

- Subject Lands contain a vegetation patch greater than 0.5 ha (not on Schedule A or B).

An Environmental Impact Study (EIS) is the appropriate method, as guided by the Official Plan policies, to assess natural heritage features and functions within the Subject Lands to support the proposed development.

The beginning sections of this EIS report provide an overview of natural heritage features, study findings, and evaluation of function of patches not on Official Plan Schedules that are in force and effect. The latter sections provide an overview of impacts and mitigation to complete the EIS report.

In addition, the Endangered Species Act (2007) protects species and habitat that are not always identified on Official Plan Schedules. To be consistent with the Provincial Policy Statement (MMAH, 2014) the requirements for an additional study can be triggered without any adjacent features identified on the Official Plan.

The following section (Section 4) reviews the natural heritage setting of the legal property. Section 5 reviews the proposed land use change in conjunction with generic natural heritage issues which may require consideration in the application process.

4.0 Description of the Natural Environment

The following section reviews the abiotic and biotic features on and directly adjacent to the Subject Lands that contribute to the overall natural heritage features and functions. This review provides relevant background information for interpreting environmental features and functions on the Subject Lands for the evaluation in Section 5.

4.1 Physical Setting

4.1.1 Physiography

Bedrock in the area is Middle Devonian-aged limestone, dolostone, and shale of the Hamilton Group (Chapman and Putnam, 1984). The Subject Lands are underlain by glaciolacustrine and glaciofluvial deposits of gravel and gravelly sand (Dreimanis, 1970).

4.1.2 Soils

Soils in the area are predominantly glaciolacustrine and glaciofluvial deposits of gravel and gravelly sand associated with Lake Erie (Dreimanis, 1970). The soil series in this area is characteristic of the Muriel Association that is categorized as having moderately well to imperfectly drained soils (Hagerty and Kingston, 1992).
Within the Subject Lands, soils are sand overlain by clay (Water Well Records - ontario.ca).

4.1.3 Topography

Regionally the lands slope gently towards the Thames River located 1.5km north of the Subject Lands. Site specifically, the lands are gently undulating, with an overall slope to the southwest.

4.1.4 Hydrology

The Subject Lands are part of the River Bend Corridor watershed within the larger Upper Thames River watershed. Historic well records identified localized groundwater between 18m and 19m below ground surface (mbgs) in gravel substrate (Sydney Earl, 1959) [Appendix C]. The Thames-Sydenham and Region Source protection map suggest this area is not a concern for groundwater vulnerability (UTRCA online mapping).

There are no watercourses located within the Subject Lands. The closest watercourse is Parker Drain (Class F drain) located approximately 300m east of the Subject Lands.

4.2 Biological Setting

The Dingman Creek Fen PSW Complex is located over 380m from the western extent of the Subject Lands and is separated from the subject lands by residential development, Tote Road and approved aggregate extraction.

No woodlands were identified within the Subject Lands on Schedule B1 (City of London Official Plan, 2015) [Figure2]. There is an unidentified patch greater than 0.5 ha (mostly off site) that is the subject of this EIS.

4.2.1 Vegetation

The vegetation communities found on the Subject Lands are primarily upland communities [Figure 6] and are summarized in Table 1. Ecological Land Classifications (ELC) are based on Lee et al. (1998). Field work was conducted by Will Huys, MNR certified in ELC, in 2018. ELC information sheets are provided in Appendix D.

Table 1: Ecological Land Classifications for the Subject Lands

Community Type	Polygon	ELC Code	Area (ha)	Description	S-rank
				Terrestrial Communities	
Anthropogenic	R1	-		Maintained lawn and residential dwelling	n/a
	R2	-		Maintained lawn and garage	n/a
	A	-		Active agriculture	n/a
Natural Successional	1	CUW-1	1.5	Mineral Cultural Woodland (Black Walnut Dominant)	n/a
	2	CUM-1	1.9	Dry-Moist Old Field Meadow Type with Black Walnut Hedgerow Inclusion	n/a
	3	CUT-1	0.5	Mineral Cultural Thicket	n/a

The Subject Lands encompass all of the vegetation communities noted above including the active agriculture and residential areas. All of the communities listed in Table 1 are also common and secure in Ontario (NHIC, 2019).

Community 1a and 1b is collectively Community 1, a CUW-1 Mineral Cultural Woodland dominated by Black Walnut and Hackberry in the canopy layer. The community could easily be labelled Cultural Savannah to reflect the historic setting as landscape trees around the residences. In Community 1a (0.6 ha), on the subject land, the understorey is predominantly composed of Black Raspberry, Tartarian Honeysuckle, and Riverbank Grape. Based on the ground layer condition, it appears this area was mowed regularly within the last 3-5 years. To the east, on the adjacent property, Community 1b (0.9 ha) is also dominated by Black Walnut but the ground layer was maintained lawn during the study.

Community 2 is a CUS1 Mineral Cultural Savannah Ecosite with a Black Walnut inclusion. The canopy of the inclusion is exclusively Black Walnut. The sub-canopy is composed of Eastern Red Cedar, Staghorn Sumac, and Gray Dogwood. It appears the field may have been harvested for hay previously as evidenced by a pile of rotting hay bales in the south-east corner of the community. A portion of Community 2 was disked in mid-June of 2018. According to the landowner, the disking was part of a row crop rotational schedule in the land rental agreement that continues today [Appendix D1].

Community 3 is a CUT-1 Mineral Cultural Thicket. The canopy layer is dominated by Staghorn Sumac and Hackberry. The understorey layer is dominated equally by Black Raspberry and Gray Dogwood.

4.2.2 Wildlife Habitat

MNRF Significant Wildlife Habitat (SWH) Criteria Schedules for Ecoregion 7E (January 2015) uses ELC Ecosite codes and habitat criteria (eg. size of ELC polygon, location of ELC polygon) to identify candidate significant wildlife habitat. Candidate SWH must meet wildlife use thresholds to be considered confirmed significant habitat. Life science data was collected in 2018 and 2019 and

was used to determine if the identified candidate habitats from the SWH review are significant. The following candidate SWH was noted [Appendix E]:

Habitats of Species of Conservation Concern (not Endangered or Threatened Species)

- Special Concern and Rare Wildlife Species

No other components of SWH were met, including those checked off in the EIS Scoping meeting [Appendix E].

Using site specific life science information collected, the above candidate SWH is further evaluated in Section 4 based on the defining criteria (species presence, abundance, diversity) to make the final determination of the presence of SWH. This analysis is provided in Section 5 which follows the life science overview.

4.2.3 Aquatic

There are no aquatic species of significance or critical habitat for aquatic species at risk within 1 km of the Subject Lands (DFO, 2019; NHIC, 2019). The Subject Lands do not contain any aquatic habitat and the closest watercourse is Parker Drain which is a Class F drain located approximately 300m east of the Subject Lands.

Summary: There is no aquatic habitat present within the Subject Lands and therefore no habitat for threatened and endangered aquatic species is present. As there is no aquatic habitat present, no further consideration is required.

4.2.4 Flora

Background research using the NHIC database and correspondence with the MNRF identified 3 significant floral species that are found or are potentially found within 1 km of the Subject Lands [Table 2] (NHIC, 2019).

Table 2: Provincially Significant Floral Species within 1 km of the Subject Lands

Common Name	Scientific Name	S-Rank	ESA Listing	SARA Listing
American Chestnut	*Castanea dentata*	S1S2	END	END
Blue Ash	*Fraxinus quadrangulata*	S2	THR	THR
Hairy Fruited Sedge	*Carex trichocarpa*	S3	N/A	N/A

Prior correspondence with the MNRF from the Stage 1 Information Request response (2019) indicated that there are no known occurrences of floral Species at Risk (SAR) within the Subject Lands [Appendix F].

Considering the limited habitat variety within the Subject Lands (active agriculture, residential, and cultural pioneer communities) there is no suitable habitat for the floral species noted above.

A three season site specific floral inventory was conducted by Will Huys on April 17, May 9, June 5, June 20, August 21, and September 21, 2018 [Appendix G]. No species of conservation concern or rare floral species, nor the species identified in Table 2, were found on the Subject Lands during the site specific inventories. Floristic quality of the area is poor with the mean coefficient of conservatism less than 2.0 and a Floristic Quality Index of less than 13.

Summary: Site specific floral investigations did not observe any floral SAR, Special Concern, S1-S3 ranked, or regionally significant floral species within the Subject Lands.

4.2.5 Fauna

Background research using the NHIC database and correspondence with the MNRF identified one provincially significant faunal species that is found or is potentially found within 1 km of the legal parcel [Table 3] (NHIC, 2019).

Table 3: Provincially Significant Faunal Species within 1 km of the Subject Lands

Common Name	Scientific Name	S-Rank	SARO Listing	SARA Listing
Yellow-breasted Chat	*Icteria virens*	S1B	END	END

Prior correspondence with the MNRF from the Stage 1 Information Request response (2019) indicated that there are no known occurrences of faunal SAR within the Subject Lands [Appendix F].

Avifauna

A two visit breeding bird survey was completed by Will Huys in 2018 to assess the Subject Lands for the presence of SAR birds [Appendix H]. The field visits took place on:

- June 5th, 2018
- June 20th, 2018

Eastern wood-pewee (Special Concern) was observed within Community 1, Mineral Cultural Woodland that straddles the eastern property line. No avian species protected under the ESA were observed during the 2018 breeding bird study.

No other species of provincial interest, other than Eastern Wood-pewee [SC] was found.

Amphibians:

No permanent ponded water was observed during any site investigations in 2018 and 2019. There was an ephemeral pond observed on the Subject Lands during the early spring amphibian monitoring, however was dry in May and June. Amphibian monitoring was conducted by Will Huys on April 21, 2018 at the observed ephemeral pond on site and no amphibians were heard calling [Appendix I]. There was no habitat to support amphibian breeding beyond early spring (April), so additional amphibian monitoring was not completed.

Reptiles

No SAR reptiles were identified from the NHIC background review or through MNRF correspondence (NHIC, 2019). No species specific targeted surveys were required for reptiles and no further consideration is required.

Mammals

No potential bat maternity roosts were observed [Appendix I - general field sheets], nor any evidence of any SAR mammals or habitat.

Summary: Eastern Wood-pewee (Special Concern) was observed within Vegetation Community 1 (Mineral Cultural Woodland). There were no floral SAR, Special Concern or S1-S3 ranked species within or adjacent to the Subject Lands. There is no permanent amphibian habitat and no suitable SAR reptile habitat within the Subject Lands.

5.0 Natural Heritage Policy Considerations

This section reviews the provincial, municipal and Conservation Authority regulatory policies within the project location with respect to Natural Heritage considerations.

The provincial and municipal natural heritage policies provide guidelines that determine appropriate land uses on and adjacent to natural heritage features and functions. Policies that pertain to this site include:

- the 2014 Provincial Policy Statement from MAH, Section 2.1
- these have been reviewed with the Natural Heritage Reference Manual (NHRM) (MNR, 2010),
- the City of London Official Plan, Section 15.2 and 15.4,
- the City of London Environmental Management Guidelines (2007), and
- the UTRCA Regulations.

The natural features and functions identified in Section 4 of this report are applied to the above policies in order to determine which components of the natural heritage system will require additional consideration.

5.1 Provincial Policy

The Provincial Policy considerations are based on Provincial Policy Statement from MAH, 2014, section 2.1 and reviewed using the Natural Heritage Reference Manual (Sections 5-11) (MNR, 2010).

2.1.4

a), b) Significant Wetlands/Coastal Wetlands

Section 6 - Significant Wetlands and Significant Coastal Wetlands

There are no wetlands or Provincially Significant Wetlands (PSW) within the Subject Lands. The Dingman Creek Fen PSW is over 380m west of the Subject Land boundary.

2.1.5

b) Significant Woodlands

Section 7 - Significant Woodlands

The woodland patch was also not considered significant in the Riverbend Community Plan report and the London Official Plan.

c) Significant Valleylands

Section 8 - Significant Valleylands

There are no Significant Valleylands within or adjacent to the Subject Lands.

d) Significant Wildlife Habitat

Section 9 - Significant Wildlife Habitat (SWH)

Criteria to identify wildlife habitats that should be considered significant are taken from the Ecoregion Criteria Schedules (MNRF, 2015). Candidate significant wildlife habitat is based on ELC communities and was identified is Section 4.2.2. Confirmed significant wildlife

habitat is determined through appropriate field investigations and evaluation of species use.

Based on presence of ELC code and habitat criteria, the following candidate SWH are reviewed using the MNRF (2015) required wildlife use thresholds (i.e., target species, population numbers, etc.) to determine significance:

1) Habitats of Species of Conservation Concern (not Endangered or Threatened Species)

There is habitat for Eastern Wood-pewee (Special Concern) within Community 1 (Mineral Cultural Woodland). There are no Special Concern or S1-S3 ranked floral species within the Subject Lands.

Confirmed SWH

e) Areas of Natural and Scientific Interest

Section 10 - Significant Areas of Natural and Scientific Interest

No life science or earth science Areas of Natural and Scientific Interest were identified within or adjacent to the Subject Lands.

2.1.6

Fish Habitat

Section 11 - Fish Habitat - Broad Scale

Broad scale fish habitat, for the purposes of this review, considers downstream fisheries. There is no fish habitat within or adjacent to the Subject Lands thus there will be no impact to any fisheries downstream of the site.

Section 11 - Fish Habitat - Detailed Scale

Detailed scale fish habitat, for the purposes of this review, considers fisheries habitat within the legal parcel. There is no fish habitat within or adjacent to the Subject Lands.

2.1.7

Habitat of Endangered Species and Threatened Species

Section 5 - Significant Habitat of Endangered and Threatened Species

No habitat features for SAR nor any floral or faunal SAR were identified during the floral and faunal life science inventories on the Subject Lands.

Summary - Provincial Policy:

- There is confirmed SWH (Habitats of Species of Conservation Concern - Eastern Wood-pewee) within Community 1.

5.2 Municipal Policy

The Municipal Policy Natural Heritage considerations are based on the City of London Official Plan, 2006, section 15.4.

15.4.1 Environmentally Significant Areas

There are no Environmentally Significant Areas identified by the City of London Official Plan within the Subject Lands. The Dingman Creek Fen PSW Complex is located about

400m from the Subject Lands boundary and will not be impacted by development of the site.

15.4.2 Wetlands

No wetlands have been identified within or within 120m of the Subject Lands.

15.4.3 Areas of Natural and Scientific Interest

There are no Areas of Natural or Scientific Interest within or adjacent to the Subject Lands.

15.4.4 Habitat of Endangered, Threatened and Vulnerable Species

There is no habitat for Endangered, Threatened, or vulnerable species within the Subject Lands.

15.4.5 Woodlands

"Potentially significant woodlands and other vegetation forms that have not been evaluated are designated as Environmental Review on Schedule A and delineated as Unevaluated Vegetation Patches on Schedule B1." (Official Plan, OPA 438, July 2011).

The City of London Guideline Document for the Evaluation of Ecologically Significant Woodlands (March 2006) "apply to all vegetation patches outside ESA's and wetlands as identified on Schedule B and designated as Environmental Review on Schedule A."

Woodlands that are determined to be ecologically significant on the basis of the Official Plan criteria and the application of the Woodland Guidelines will be designated as Open Space on Schedule A and delineated as Significant Woodlands on Schedule B1 (Policy 15.4 OPA 438, July 2011).

The vegetation patch that straddles the east boundary is not mapped on either Schedule A or Schedule B1. The Official Plan criteria for significance and the Woodland Guidelines therefore do not apply. Section 15.4.15 Other Woodland Patches Larger than 0.5 ha is the applicable policy which is discussed below.

15.4.6 Corridors

There are no significant corridor areas within or adjacent to the Subject Lands.

15.4.7 Wildlife Habitat

i) The review of significance of wildlife habitat is based on the following considerations that have had regard for and having regard for the Significant Wildlife Habitat Technical Guide (MNRF, 2000)

a) *1) Habitats of seasonal concentrations of animals:*

No seasonal concentration areas for wildlife were identified within the Subject Lands.

2) Rare vegetation communities

No rare vegetation communities were identified within the Subject Lands.

3) Specialized habitat for wildlife

There are no areas that support wildlife species that have highly specific habitat requirements, or area of exceptionally high species diversity. The wildlife species that are found within the Subject Lands are not diverse and are common for the vegetation communities present.

4) *Habitat of species of conservation concern*

Eastern Wood-pewee (SC) was observed within Community 1 on the Subject Lands.

5) *Animal movement corridors*

There are no distinct passageways for wildlife movement between habitats that are required to complete wildlife species life cycles.

b) The subject lands does not have any habitat that is under represented in the City of London.

c) There are no areas of habitat having a high diversity of species composition that are of value for research, conservation, education and passive recreation opportunities.

ii) There are no area of Significant Wildlife Habitat identified on Schedule B1.

15.4.8 Fish Habitat

There is no fish habitat present within the Subject Lands as there are no watercourses present.

15.4.9 Groundwater Recharge Areas, Headwaters and Aquifers

There are groundwater recharge areas identified over most of the Subject Lands [Figure 2]. However, the Thames-Sydenham Source proctection maps suggest there is no groundwater vulnerability on these subject lands.

15.4.10 Water Quality and Quantity

There are no aquatic features within or adjacent to the Subject Lands. There is no channel connection between the Subject Lands and the mapped wetland over 250m south of the site. The natural heritage system policy 15.4.9 (above) protects the groundwater recharge feature mapped on site.

15.4.11 Potential Naturalization Areas

There are no listed Potential Naturalization Areas within or adjacent to the Subject Lands.

15.4.13 Unevaluated Vegetation Patches

Large Unevaluated Vegetation Patches delineated on Schedule B1 identified through environmental studies are designated Environmental Review on Schedule A. “Smaller patches may have previously been designated for development or agricultural activity.” (City of London OPA 438, Dec.17/09). There are no mapped Unevaluated Vegetation Patches on Schedule B1.

15.4.14 Other Woodland Patches larger than 0.5 Hectares

The vegetation patch that straddles the eastern property line is designated Low Density Residential.

To be consistent with the Official Plan policies, the unmapped vegetation is assessed through the scope of an EIS.

> "In addition to areas that are designated Environmental Review or Open Space, woodland patches in other designation that are larger than 0.5 ha shall shall be evaluated...Where it is considered appropriate, the protection of trees or other vegetation will be required through measures such as, but not limited to, Tree Preservation plans...acquisition of land...conservation easements, landowner stewardship initiatives, and zoning provisions." added by OPA 438 Dec 17/09).

Eastern Wood-pewee habitat, in the woodland that straddles the property, will be considered through the above measures later in this EIS.

There are no SAR, Special Concern or S1-S3 ranked floral species within Community 1. There is no amphibian breeding habitat. The tree species is dominated by Black Walnut and Hackberry. Community 1 (Mineral Cultural Woodland) is considered further in this EIS.

15.4.15 Other Drainage Features

No other water features (i.e. municipal drains) are within the Subject Lands. Parker Drain, which is a Class F Drain, is located approximately 300m east of the Subject Lands but is not hydrologically connected to any feature within the Subject Lands.

Summary - Municipal Policy:

- Vegetation Community 1 has habitat for Eastern Wood-pewee (Special Concern) and is considered further in this report.

5.3 UTRCA Policy Considerations and Regulated Lands

The Subject Lands are not within the regulation limit for the Upper Thames Region Conservation Authority. A section of the Legal Parcel over 250m south of the Subject Lands is regulated by UTRCA.

Summary: The proposed development within the Subject Lands is not within a UTRCA regulation limit so no permit is required.

5.4 Summary of Identified Features and Functions

The features and functions in Table 4, have been identified through the policy review as requiring further consideration in an EIS.

Table 4: Environmental Considerations for the Subject Lands

Policy Category	Environmental Consideration	Natural Heritage Feature
Provincial Policy Statement	Significant Wildlife Habitat	Eastern Wood-pewee within Vegetation Community 1
City of London	Significant Wildlife Habitat	Eastern Wood-pewee within Vegetation Community 1
	Groundwater Recharge Areas, Headwaters and Aquifers	not applicable as Source Protection maps indicate no groundwater vulnerability in this location
	Other Woodland Patches Larger than 0.5 hectares	see SWH above

6.0 Description of the Development

The proposal is a residential development on a site of approximately 5.4ha located at 14 Gideon Dr and 2012 Oxford St W in the City of London. The Subject Lands are comprised of two contiguous sites that are considered for a single development with two internal roads. Access to the development will be from Gideon Drive at the west edge of the property. The proposed development is 39 single residential Lots, with a Multi-Family residential Block along the Oxford St/Gideon Dr arterial corridor [Figure 7]. While this development proposes a higher density than the current Official Plan, it is consistent with the Neighbourhoods place type of the London Plan that includes a diversity of housing choices. The development proposal will require a Zoning bylaw amendment for the combination of multi-family and single-family residential to bring zoning into conformity with the London Plan.

6.1 Servicing

The Subject Lands are located within the River Bend Community Planning Area. Sanitary servicing for the proposed development will be provided by Riverbend Pumping Station and the Oxford Street Pollution Control Plant (Stantec, 2018). The site will be serviced by local sanitary sewers located in the municipal rights-of-way proposed within the development and will outlet to the trunk sewer on Gideon Dr.

Minor storm flows will be collected by a municipal storm sewer system within the municipal rights-of-way. The sewer system will drain north towards Gideon Dr where it will be collected by a larger trunk sewer for conveyance to the Riverbend SWMF Trib. C ‘A”, located north of Oxford St. The major flows will be directed west down existing Oxford St W ditches for conveyance to the Thames River.

7.0 Impacts and Mitigation

This section identifies potential direct and indirect impacts to the significant natural heritage features within and adjacent to the development footprint [Figure 8]. Appropriate avoidance, protection and mitigation measures for the impacts are also presented.
Based on the analysis in Section 5.0, the **significant** feature identified is Eastern Wood-pewee habitat within Community 1.

7.1 Direct Impacts

The Draft Plan proposes the removal of a portion of Community 1 (0.6ha of a patch approximately 1.5ha in area). The majority of Community 1 is dominated by Black Walnut and Hackberry with non-native species composing a large portion of the understorey (Tartarian Honeysuckle). The patch does support confirmed breeding habitat for Eastern Wood-pewee [Figure 8; Figure 9].

Eastern Wood-pewee breed in deciduous and mixed woods, with a preference for open space at forest edges, clearings, roadways and water (Cadman *et al*, 2007). Despite a population shift in its northern range, Eastern Wood-pewee is very common in Southwestern Ontario and found in all atlas squares in Southern Ontario (Cadman *et al* 2007) [Appendix H]. In fact, some studies have found a non-significant increase over time (Cadman *et al*, 2007; COSEWIC, 2012). This species is found in most woodlots of any size in the London area and, as it is very territorial, there is typically only one nesting pair in woodlands of this size (territories range from 2-8 hectares - Cornell University www.allaboutbirds.org).

Habitat for the single Eastern Wood-pewee territory will persist within the remainder of the woodland on adjacent lands.

> **Recommendation:** A tree inventory was completed for Community 1 by Will Huys in 2018 wherein DBH measurements and the health status of trees within the community were noted. A Tree removal and edge tree Preservation Plan to mitigate for the impacts to Community 1 will accompany detailed site design.

While not necessary for this development application from a purely planning perspective, there are opportunities the landowner is willing to consider, to plant a similar size area to expand a woodland to the south, within the remaining legal parcel [Figure 9]. This proposed landscape area would use native species suitable to the area and the surrounding vegetation community. Based on the Riverbend Study, the plant list would likely consist of Sugar Maple, Oak, Basswood, Pagoda Dogwood and approved City of London groundlayer seeding. However, a final plan should be developed as part of the design studies once this concept is approved and the woodland to the south is reviewed for a final planting concept.

> **Recommendation:** An area designated as a woodland expansion is proposed south of the Subject Lands but within the legal parcel.

> **Recommendation:** A woodland area management plan should be created and implemented to ensure the continued good health of trees that will be retained in the woodland to the south. This plan would include guidance and recommendations for woody debris management and the management of invasive species to improve the health of the woodland feature in the long-term.

7.2 Indirect Impacts

The most critical times for the protection of natural heritage features and functions is during the construction phase and post-development.
Sediment controls needs to be used to ensure that sediment from the development project does not wash off the site into adjacent lands during rain events.

Recommendation: Soil stock piles should be located 30m from any natural drainage swales. If the stock piles must be within 30m of either feature, they must be protected with sediment fencing

Recommendation: All stock piles and excavations should maintain slopes of 70% or shallower during all phases of construction to prevent establishment of nest sites for Bank Swallow. Theses swallows will quickly take advantage of this type of habitat and impede construction schedules.

The majority of the proposed development is on areas that are outside of the boundary for the woodland. Provided the above recommendations are followed, the natural heritage features and habitat identified in the field investigations will be effectively protected and mitigated from construction related impacts.

7.3 Additional Considerations Requested By City

Following the EIS Scoping Meeting, the checklist was provided as a summary. Several items were added to this checklist which were not specifically discussed in the meeting. Many are related to broader planning considerations such as Linkage and Corridors, Landscape (size, corridors, proximity and fragmentation) and importance to humans (healthy landscapes, aesthetics) or targets set out by the sub-watershed studies. All of these items have been considered in the Area Planning and opportunities to change these decisions, even if pertinent for this site, are limited now that development surrounds the Subject Lands. Agriculture will continue to the south.

What is left of the checklist are some site specific functions which are not well defined in the context of evaluation, again, as a result of the prior decisions for the area. However, as noted in the report, the landscape is a remnant treed area near a residential house. As a result, the feature is impacted with introduced species and general disturbance reflected by poor quality floristics. Furthermore, the feature has limited habitat benefit, even if fully retained, since prior development approvals have cutoff any potential linkage to the Thames River corridor to the north. The only species that receives some provincial consideration is the Eastern Wood-pewee which has been discussed previously. The requirements of Wood-pewee, as well as the other common species found, are well served in the surrounding more robust natural heritage landscapes of the Thames River system, as well as the woodlands to the south. The landowner offers to provide additional tree planting in the south wooded location, which will expand the habitat and help to fill in bays and smooth out some edge effects.

8.0 Summary and Conclusion

The proponent is proposing a residential development on a site of approximately 5.4ha located at 14 Gideon Dr and 2012 Oxford St W in the City of London [Figure 1].

This EIS provides an inventory, evaluation, and assessment of significance of the features and functions on the Subject Lands. It has identified the significant natural heritage features and functions, and environmental management requirements (including further study) to adequately manage and protect the features and functions. The primary feature for consideration is Community 1 at the east edge.

A tree preservation report should be completed for Community 1 to provide an assessment of individual trees and to guide the grading plan for the development. The larger woodland to the south within the Legal Parcel will be planted with native trees to provide an expanded woodland habitat within the legal parcel.

MTE seeks comments from the City of London and the UTRCA with respect to the contents of this EIS. Formal comments can be submitted in writing to MTE on behalf of the client. Should you wish to clarify any questions or require additional information as part of the review of this EIS, do not hesitate to contact us.

All of which is respectfully submitted,

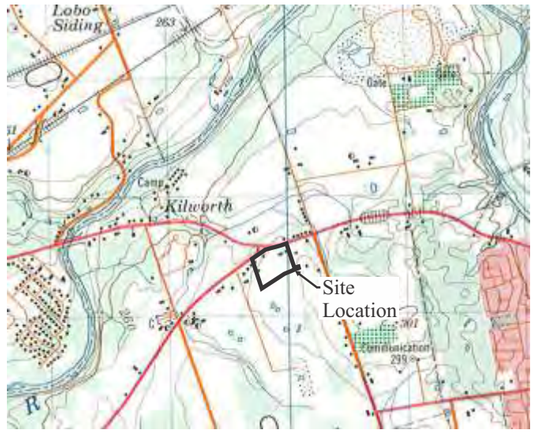
MTE Consultants Inc.

Dave Hayman, M.Sc.
Manager, Environmental
519-204-6510 ext 2241
Windsor Field Office: 519-966-1645
dhayman@mte85.com

DGH: sdm; ZA

Figure 1: Site Location

(2017 City of London Air Photo)



Scale 1:50,000
Key Plan

Print on 11X17, Landscape Orientation

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Scale 1:5000
August 2020

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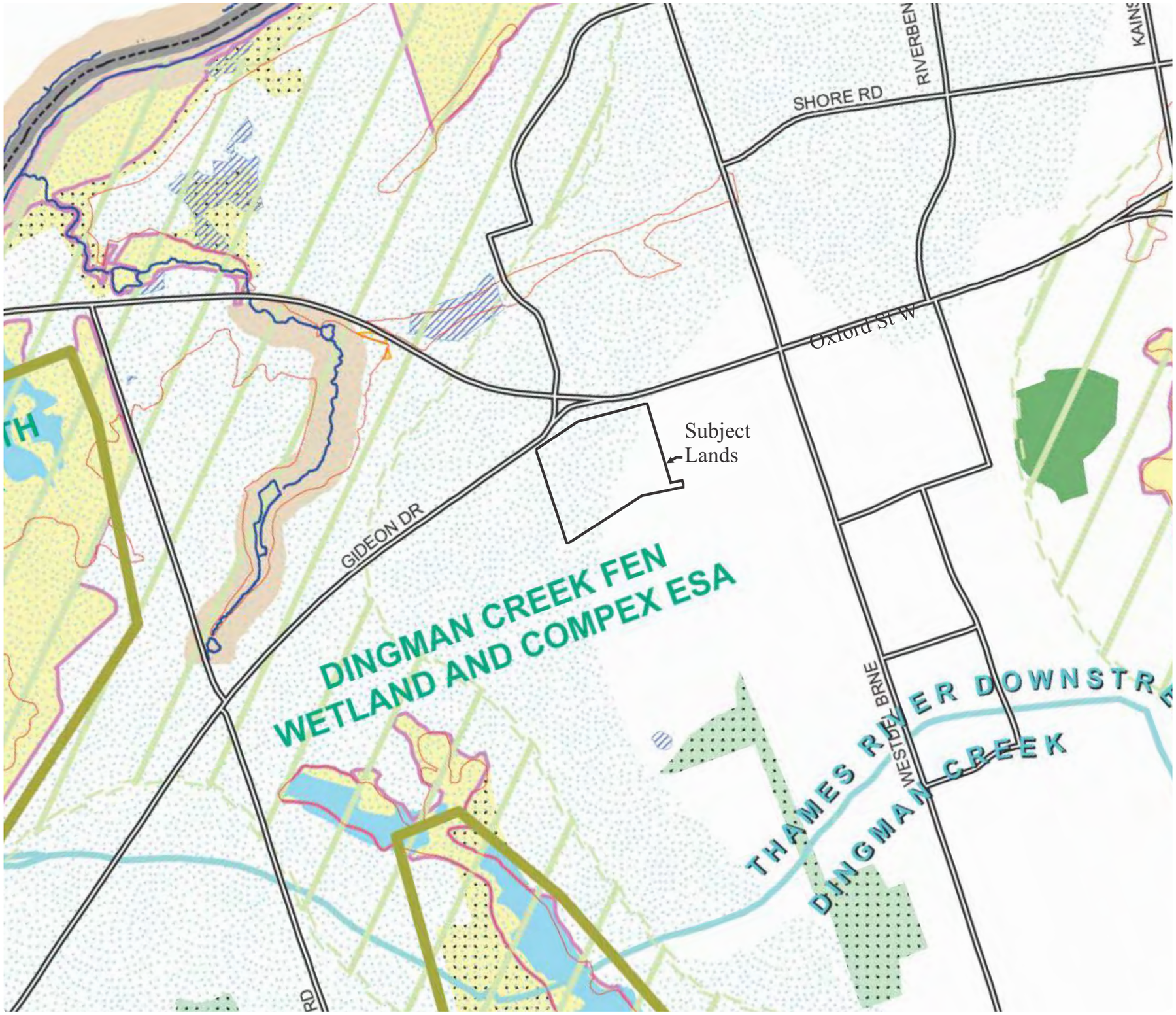
Figure 2a: Natural Features
(City of London Official Plan Schedule B1, 2019)



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Scale 1:50,000
Key Plan

Legend

- ESAs
- Potential ESAs
- Significant Woodlands
- Unevaluated Corridors
- Prov Significant Wetlands
- Locally Significant Wetlands
- Unevaluated Wetlands
- Pot Naturalization Area
- Pot Upland Corridor
- Woodlands
- Unevaluated Vegetation Patches
- Significant Corridors
- Ground Water Recharge
- Max Hazard Line
- Cons. Authority Bndry
- SWS Bndry
- Big Picture Meta-Cores and Meta-Corridors
- Provincial ANSI Boundary

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August 2020

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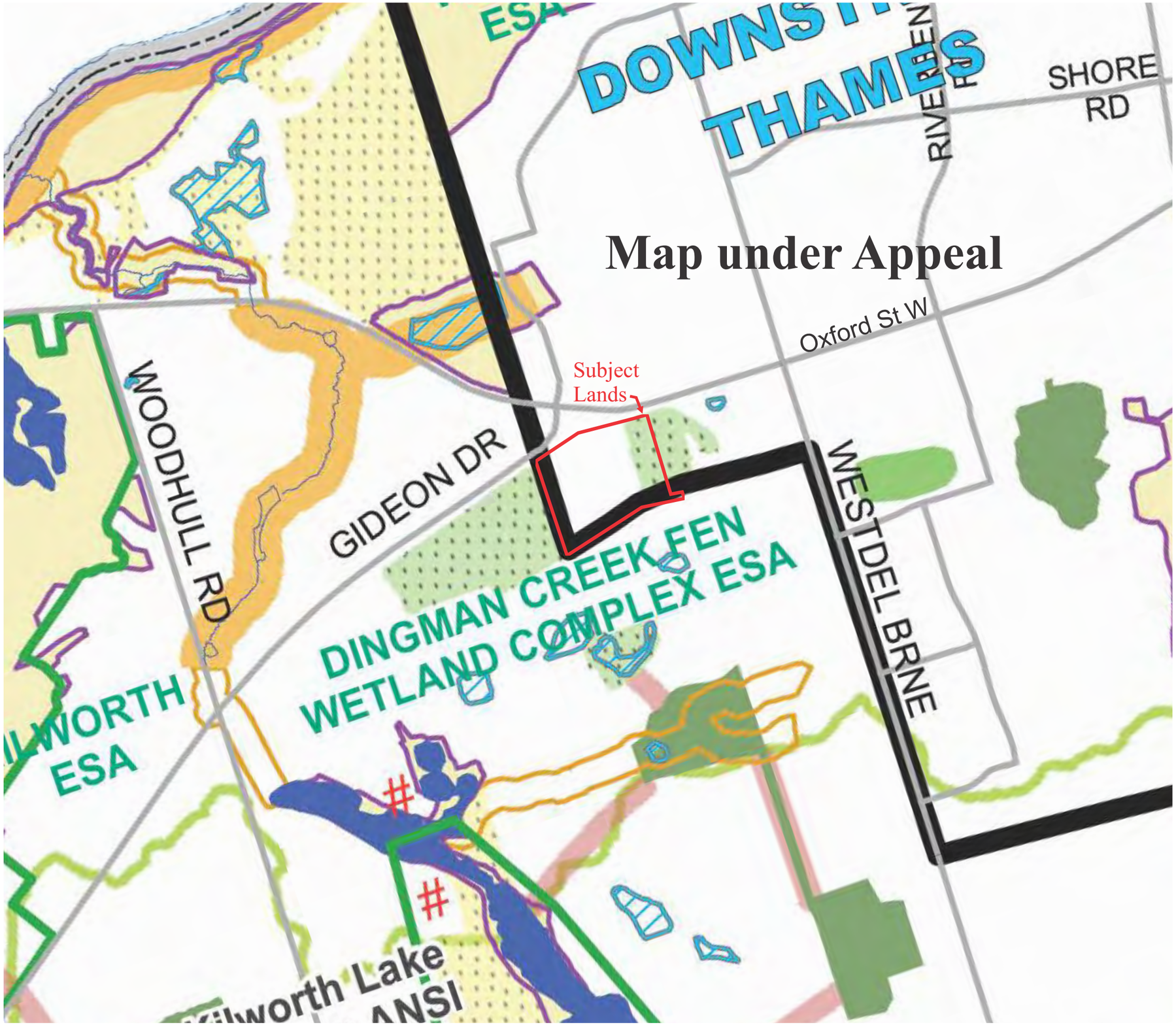
Figure 2b: Map 5 - Natural Heritage

(City of London - London Plan, May 2019)



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Key Plan

Legend

- Provincially Significant Wetlands
- Wetlands
- Unevaluated Wetlands
- Significant Woodlands
- Woodlands
- Significant Valleylands
- Valleylands
- Areas of Natural and Scientific Interest
- Environmentally Significant Areas (ESA)
- Potential ESAs
- Upland Corridors
- # Potential Naturalization Areas
- Unevaluated Vegetation Patches

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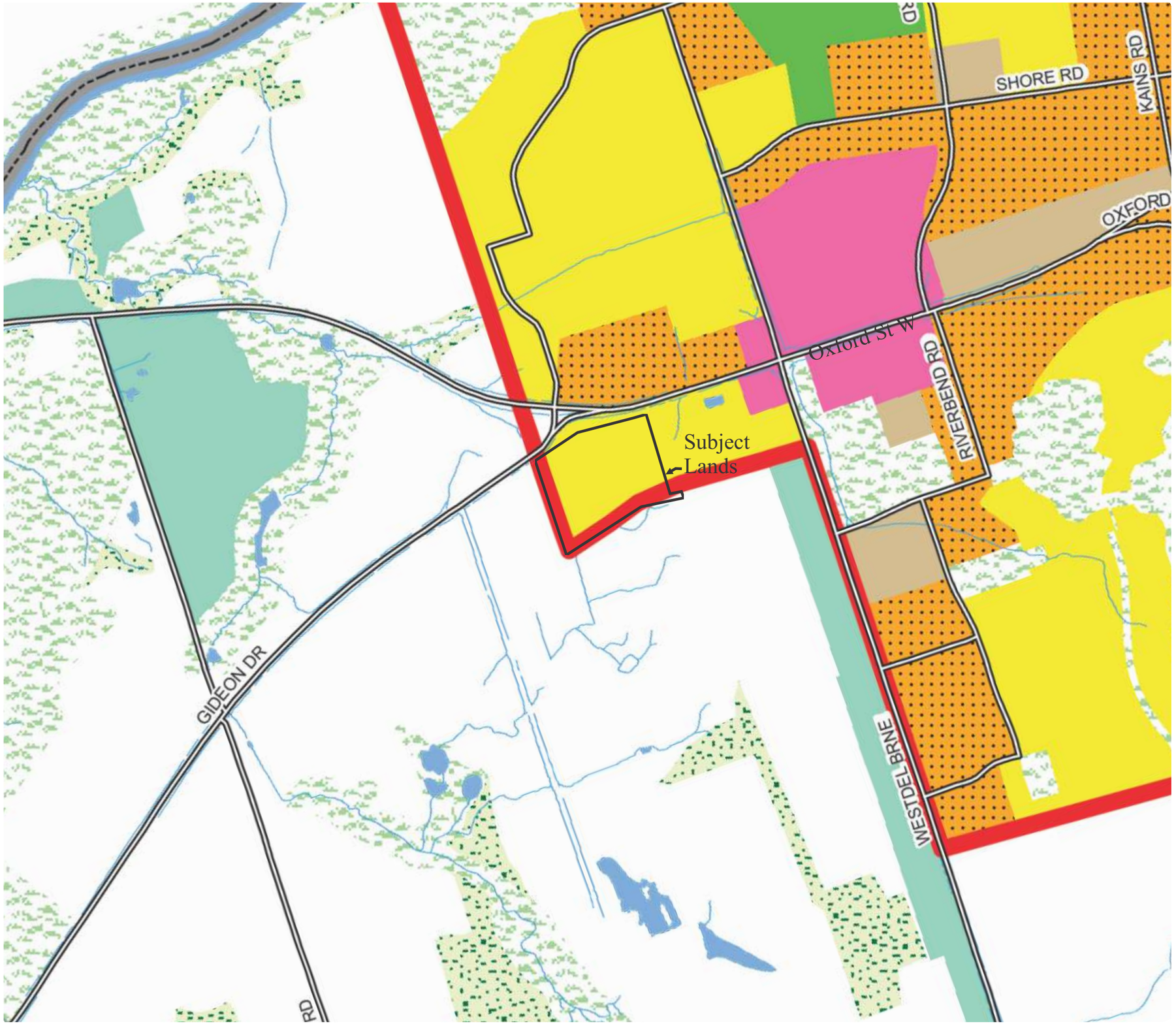
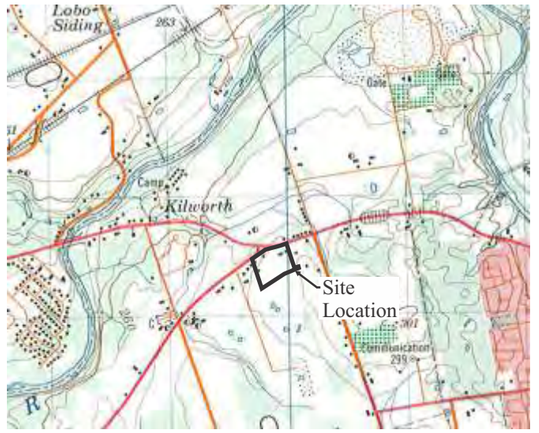
Figure 3a: Land Use
(City of London Official Plan Schedule A, 2019)





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Scale 1:50,000
Key Plan

Legend

- Community Commercial Node
- Neighbourhood Commercial Node
- Main Street Commercial Corridor
- Auto-Oriented Commercial Corridor
- Multi-Family, High Density Residential
- Multi-Family, Medium Density Residential
- Low Density Residential
- Office Area
- Office/Residential
- Office Business Park
- General Industrial
- Light Industrial
- Regional Facility
- Community Facility
- Open Space
- Urban Reserve Community Growth
- Urban Reserve Industrial Growth
- Rural Settlement
- Environmental Review
- Agricultural
- Urban Growth Boundary

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August 2020

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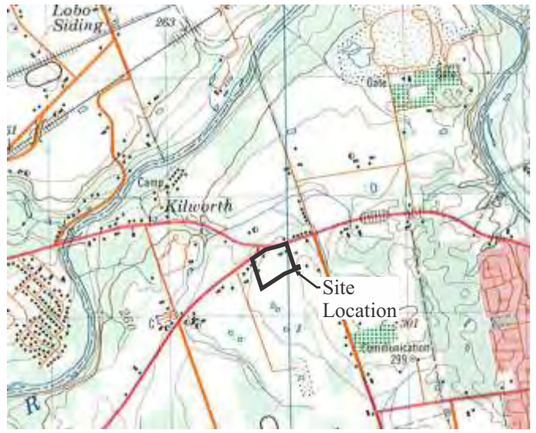
Figure 3b: Map 1 - Land Use

(City of London - London Plan, 2019)



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Key Plan

Legend

- Green Space
- Environmental Review
- Downtown
- Transit Village
- Rapid Transit Corridor
- Urban Corridor
- Shopping Area
- Main Street
- Neighbourhoods
- Institutional
- Heavy Industrial
- Light Industrial
- Commercial Industrial
- Future Community Growth
- Future Industrial Growth
- Farmland
- Rural Neighbourhoods
- Urban Growth Boundary

Print on 11X17, Landscape Orientation

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August 2020

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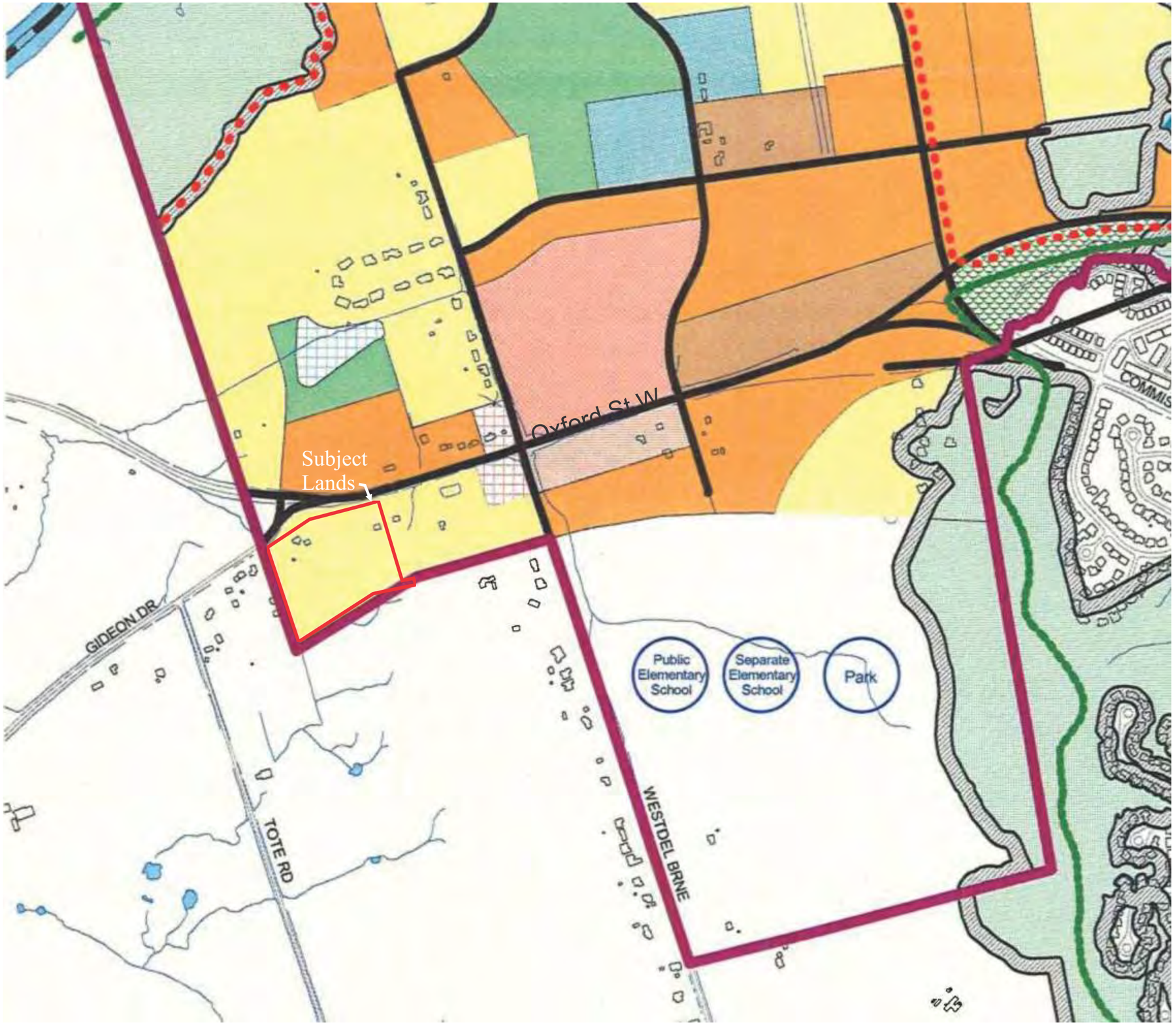
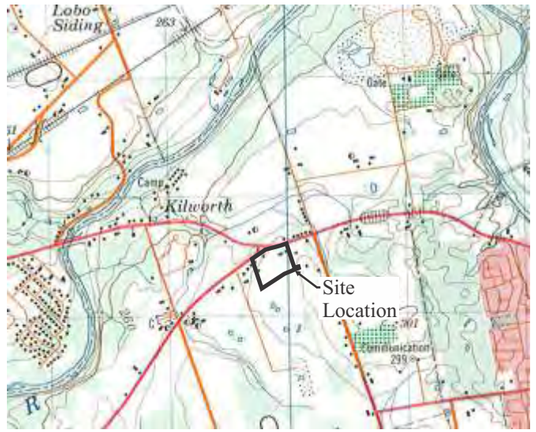
Figure 4: River Bend Community Plan

(City of London Council Approved April 2003)





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Key Plan

Legend

- Community Plan Boundary
- Trail Network
- Community Pedestrian Network
- Multi-use Pathway
- ESA Buffer (10 - 30 metres to be determined through the EIS process)
- ESA
- CSA
- Commercial
- Neighbourhood Shopping Area
- Associated Shopping Area
- High Density Residential
- Medium Density Residential
- Low Density Residential
- Elementary School
- Park
- Golf Course
- Open Space
- Storm Water Management
- Revegetation Opportunity

Print on 11X17, Landscape Orientation

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August 2020

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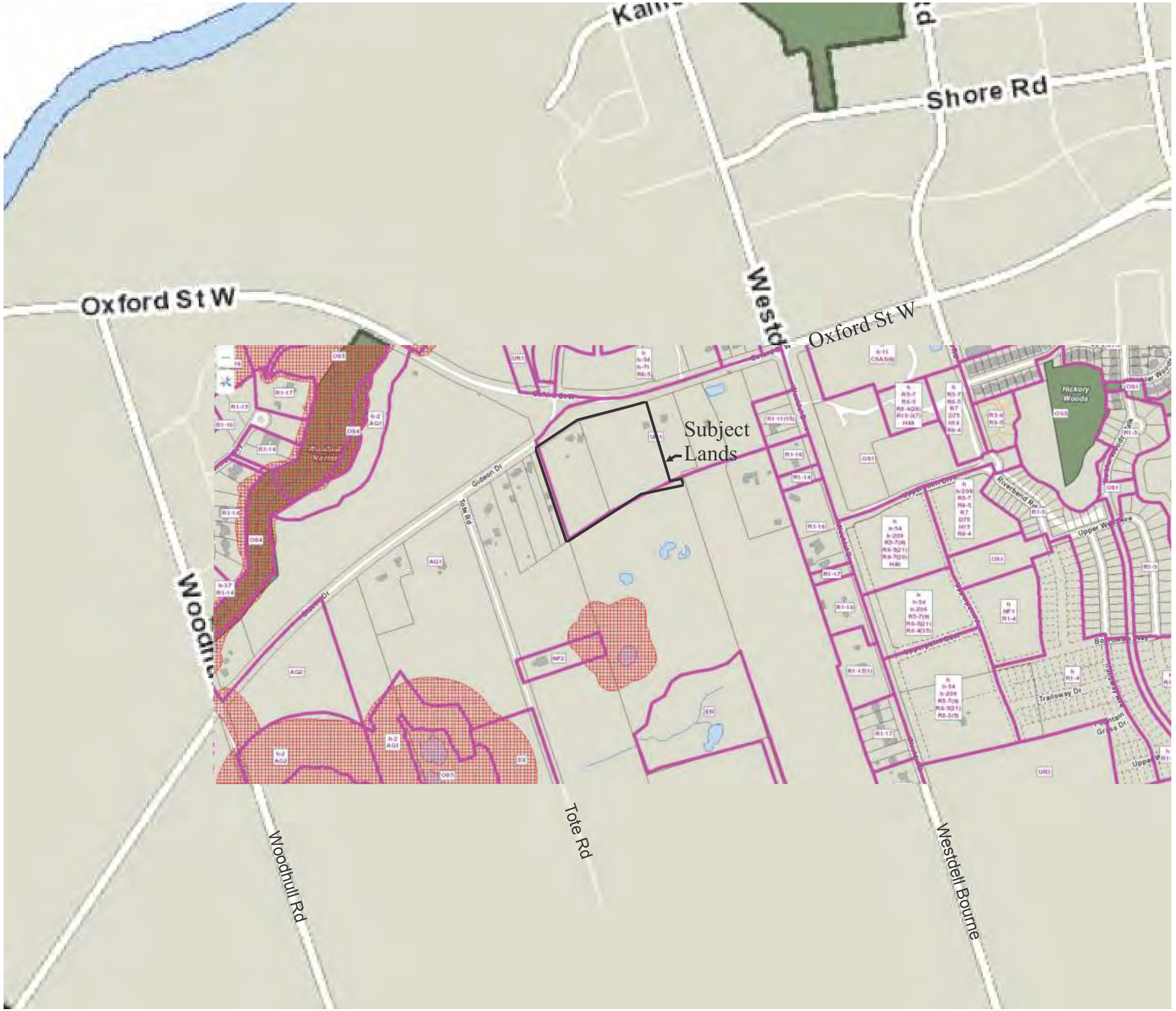
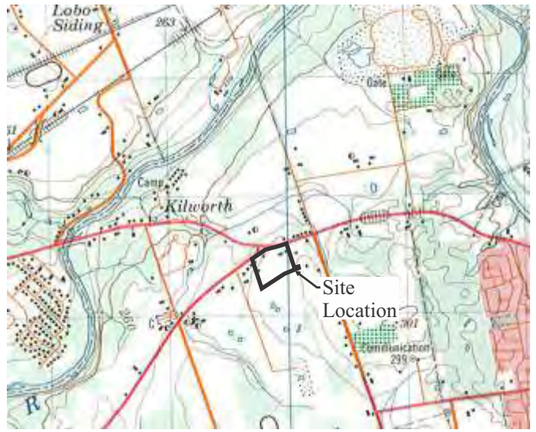
Figure 5: Zoning
(City of London Zoning)





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Key Plan

Legend

R1 - Residential R1 Zone (single unit dwellings)

R5 - Residential R5 Zone (medium density)

R6 - Residential R6 Zone (medium density)

R8 - Residential R8 Zone (medium density)

R10 - Residential R10 Zone (apartments)

AG1 - Agricultural Zone (non-intensive)

AG2 - Agricultural Zone (intensive or non-intensive)

OS - Open Space

NF - Neighborhood Facility Zone

Print on 11X17, Landscape Orientation
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Scale 1:8000
August 2020

Figure 6: Vegetation Communities
(2017 City of London Air Photo)

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Scale 1:50,000
Key Plan

1 CUW1 Mineral Cultural Woodland Ecosite
(Black Walnut dominant)
2 CUS1 - Mineral Cultural Savannah Ecosite with Walnut Hedgerow inclusion
3 CUT1 Mineral Cultural Thicket Ecosite

R1 Maintained lawn and residential dwelling
R2 Maintained lawn and garage

A Active Agriculture

Print on 11X17, Landscape Orientation
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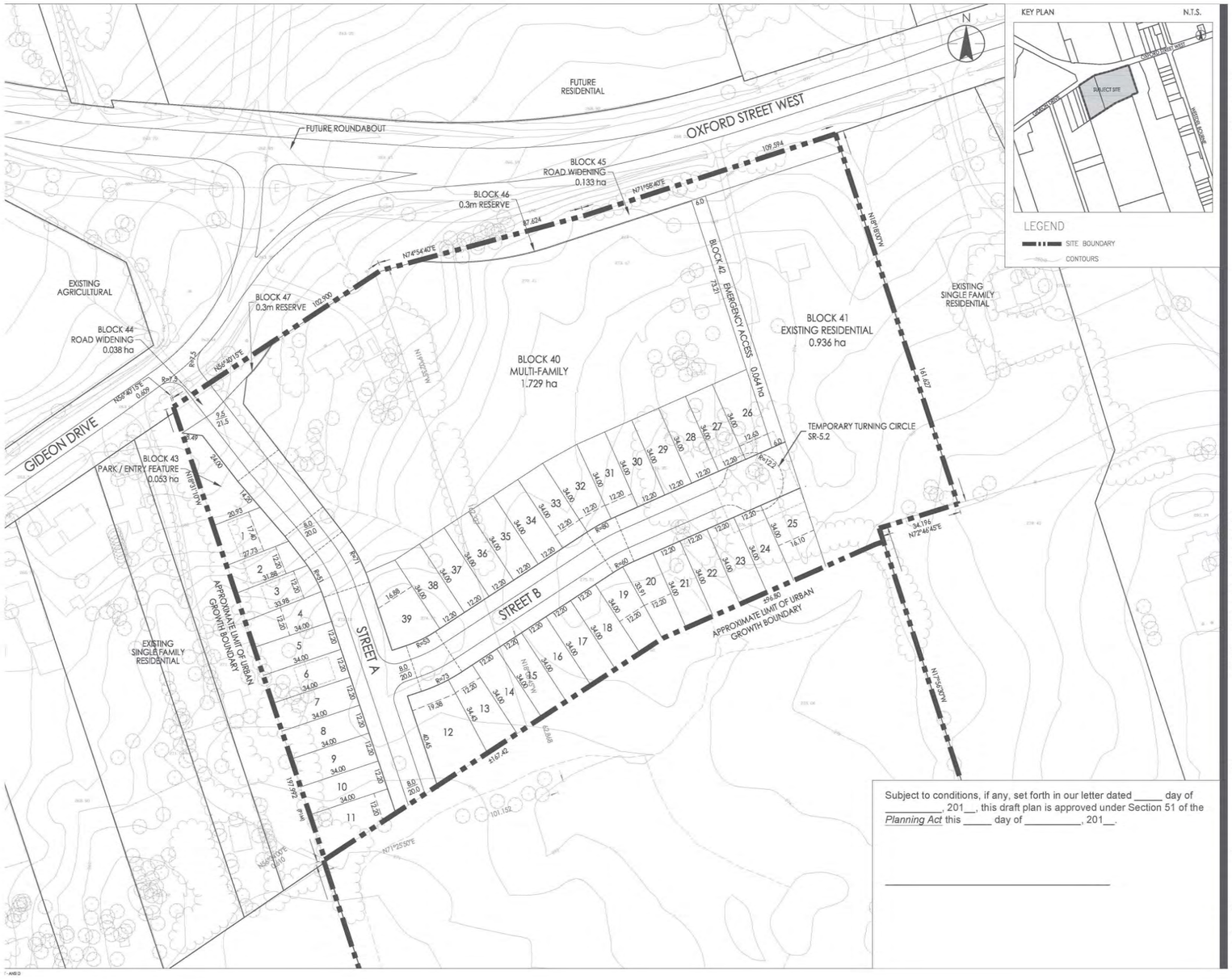
Scale 1:1500
August 2020

MTE

Figure 7: Development Proposal



Subject to conditions, if any, set forth in our letter dated _____ day of _____, 201__, this draft plan is approved under Section 51 of the *Planning Act* this _____ day of _____, 201__.

_____

Stantec

Stantec
600-171 Queens Avenue
London ON N6A 5J7
Tel. 519-645-2007
www.stantec.com

Liability Note

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.

Revision	By	Appd.	YY.MM.DD

Issued	By	Appd.	YY.MM.DD

File Name: 161413678_r-dp	RT Dwn.	CH Chkd.	RT Dsgn.	18.10.23 YY.MM.DD

Permit-Seal

Client/Project
ORANGE ROCK DEVELOPMENTS

14 GIDEON DRIVE & 2012 OXFORD STREET WEST

London, ON Canada

Title
DRAFT PLAN OF SUBDIVISION

Project No.	Scale	Sheet	Revision
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Drawing No.		1 of 1	0
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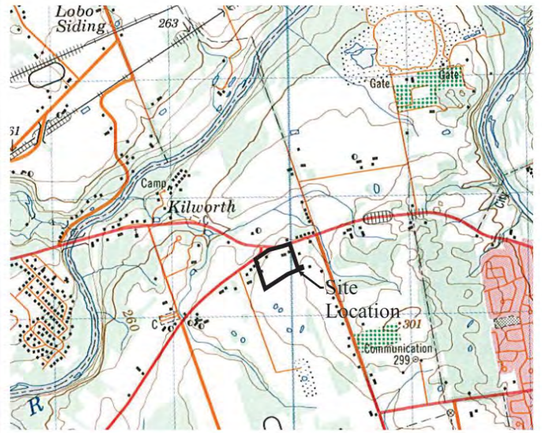

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Key Plan

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August 2020

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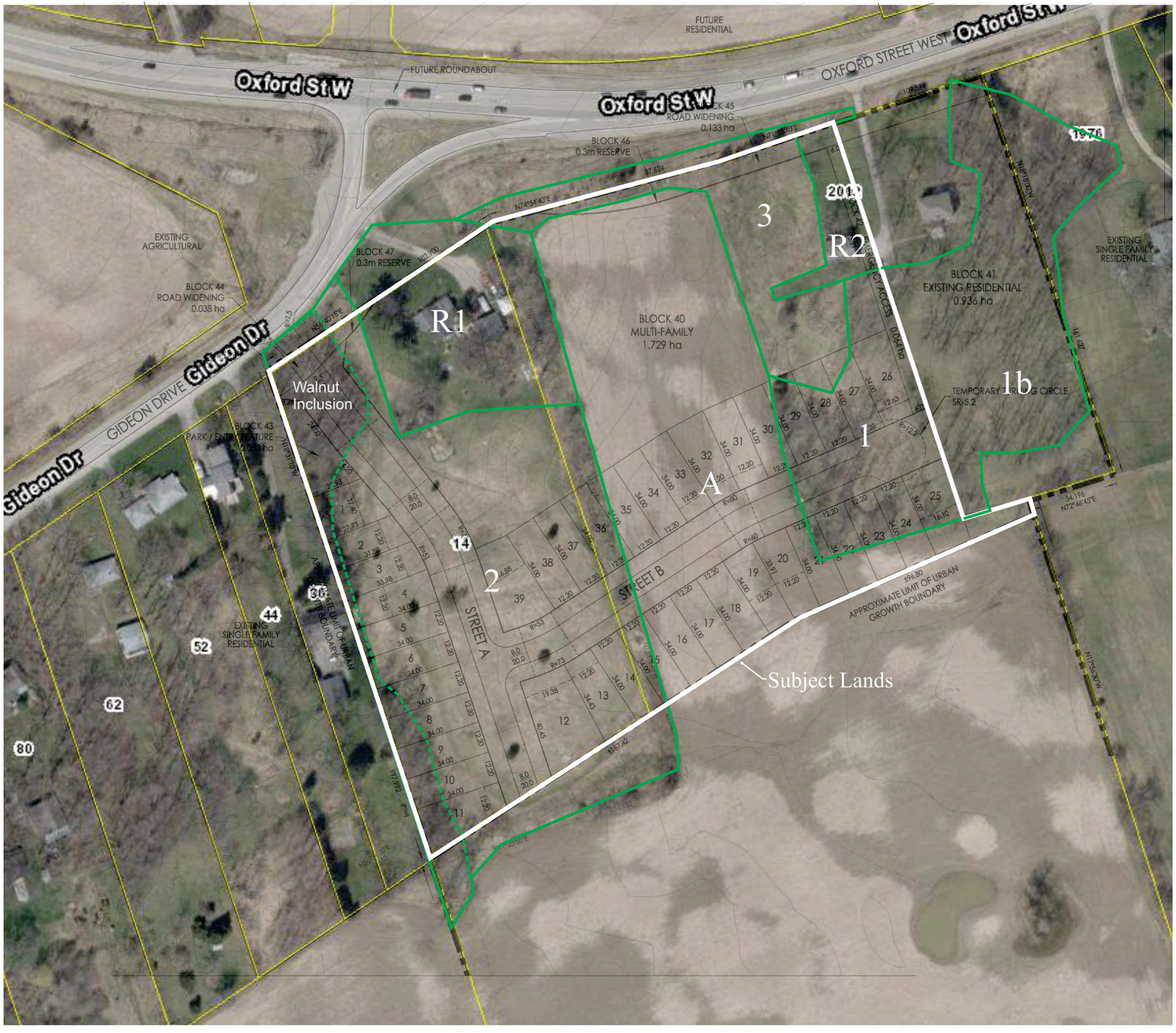
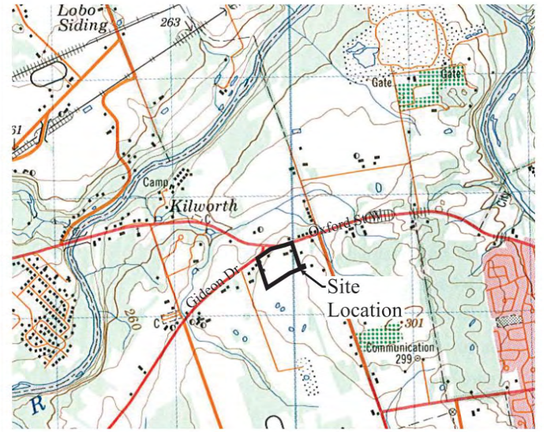
Figure 8: Draft Plan Overlay

(2017 City of London Air Photo)





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Scale 1:50,000

Key Plan

1 CUW1 Mineral Cultural Woodland Ecosite
(Black Walnut dominant)
2 CUS1 Mineral Cultural Savannah Ecosite with Walnut Hedgerow inclusion
3 CUT1 Mineral Cultural Thicket Ecosite

R1 Maintained lawn and residential dwelling
R2 Maintained lawn and garage

A Active Agriculture

Print on 11X17, Landscape Orientation

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Scale 1:1500

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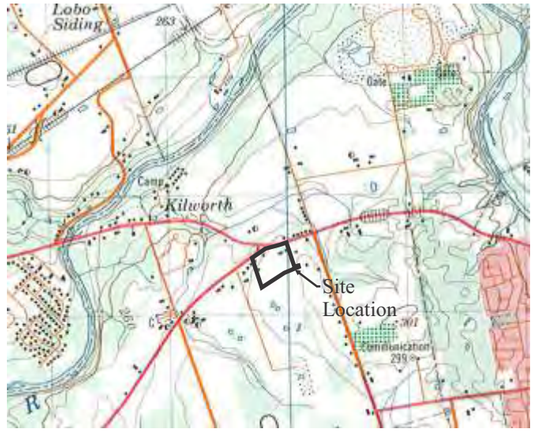
Figure 9: Tree Preservation and Compensation

(2017 City of London Air Photo)



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Key Plan

1 CUW1 Mineral Cultural Woodland Ecosite
(Black Walnut dominant)
2 CUS1 - Mineral Cultural Savannah Ecosite with Walnut Hedgerow inclusion
3 CUT1 Mineral Cultural Thicket Ecosite

R1 Maintained lawn and residential dwelling
R2 Maintained lawn and garage

A Active Agriculture

- Tree Removal and Preservation Area

- Proposed Tree Compensation Area (1:1)

Print on 11X17, Landscape Orientation

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Scale 1:5000

August 2020

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Appendix A

Proposal Review Meeting Summary

PROPOSAL REVIEW MEETING SUMMARY &
RECORD OF CONSULTATION

Date: October 11, 2018

Subject: Proposal Review Meeting
14 Gideon Drive & 2012 Oxford Street West

Meeting Date: September 12, 2018

Meeting Participants:

R. Carnegie (Coordinator)	Development Services – Planning
L. Pompilii (Chair)	Development Services – Planning
S. Wise	Development Services – Planning
I. Abushehada	Development Services – Engineering
B. Hammond	Development Services – Engineering
P. Di Losa	Development Services – Engineering
G. LaForge	Development Finance
A. Giesen	E.E.S. – Transportation
A. Sones	E.E.S. – Stormwater Management
M. Schaum	E.E.S. – Wastewater & Drainage Engineering
R. Armstrong	E.E.S. – Waterworks Engineering
B. Page	Planning – Parks Planning & Design

Owner/Applicant: Orange Rock Developments, c/o Jonathan Aarts
Authorized Agent: Stantec Consulting Ltd., c/o Nick Dyjach
Type of Application: Proposed Draft Plan of Subdivision
Location: 14 Gideon Drive & 2012 Oxford Street West
File Manager: Lou Pompilii
Planner: Sonia Wise

DEPARTMENT & AGENCY COMMENTS

The following is a summary of the comments as reported by the respective service areas/agencies in response to the proposal. It is noted that these comments do not necessarily reflect the final planning recommendation on the proposal.

DEVELOPMENT PLANNING:

Lou Pompilii *Manager, Development Services Planning*
Sonia Wise *Senior Planner*

- The use, intensity and forms of development proposed are generally in accordance with the permitted scale and uses contemplated by The London Plan
- The proposed density of 35 units per hectare and 'low-rise apartment' form exceed the range of uses and upper limit of intensity contemplated in the 1989 Low Density Residential Designation. An Official Plan Amendment may be required to the 1989 Official Plan depending on the final development details and the timing of the application submission and which plan policies prevail.
- The preservation of the existing heritage resource located at 2012 Oxford Street West is highly encouraged.
- Consider incorporating a north-south block located west of the heritage listed building(s) to serve as a pedestrian connection from Street B to Oxford Street West; which may also be used as a servicing connection for water or stormwater to the proposed subdivision (a dedicated municipal servicing corridor (not easement) would be required for use as servicing corridor).
- Consider variations in lot frontage and built form along Street B to provide a diversity of lot sizes and variety of dwelling types
- Sidewalks are to be provided on both sides of the proposed streets
- The site has been identified as being within a potential Aggregate Resource Area as per Map 6 of The London Plan. The relevant Aggregate Policies should be addressed through the Final Proposal Report.

URBAN DESIGN/PLANNING POLICY:
Britt O'Hagan *Urban Design*

- As part of the FPR, please submit a conceptual site plan for the multi-family block on the north portion of the site.
- Provide pedestrian connectivity from the cul-de-sac and the multifamily block to the north to Oxford Street W to provide safe and convenient access to the commercial node being developed at Westdel Borne and Oxford St W.
- Ensure development along Oxford St W is oriented to the arterial road with front doors and primary building facades.
    - A development form that includes rear or no garages along Oxford Street W is preferred.
    - A window street or side-lotted building form may also be considered.
    - The need for fencing and noise attenuation along Oxford Street W should be limited by providing a built form that mitigates noise impact on rear amenity spaces.
- Limit the width of garages to less than half of the unit/building width, and have them project no closer to the streets than the main building facades and/or porches.

HERITAGE PLANNING:
Kyle Gonyou *Planning - Heritage Planner*

Archaeology
- Please be advised that the subject properties at 14 Gideon Drive and 2012 Oxford Street West are located within an area identified by the Archaeological Management Plan (2017) as having archaeological potential.
- A Stage 1-2 archaeological assessment was completed by Lincoln Environmental Consulting (P344-0207-2018, dated June 2018). Further archaeological work (Stage 3) is required for two archaeological sites: LEC1 (AfHi-400) and LEC2 (AfHi-401). These sites are located outside of the area of the property subject to the proposed draft plan of subdivision. No further work is required for the area within the proposed draft plan of subdivision.
- The h-18 holding provision should be applied to the remainder of the property to ensure that archaeological issues are addressed prior to development or site alteration. Should development or construction plans change to include these areas (such as machine travel, material storage and stockpiling, site alteration), these two locations will require further archaeological work in advance of development or site alteration.

Built Heritage
- The subject property at 2012 Oxford Street West is listed on the City's Register (Inventory of Heritage Resources), adopted pursuant to Section 27 of the Ontario Heritage Act. A Heritage Impact Assessment is required as part of a complete application.
- The proposed draft plan of subdivision appears to include the built heritage resource at 2012 Oxford Street West in Block 44 (Multi-Family). This has the potential to isolate the built heritage resource. Further and careful evaluation and assessment is required to ensure that significant built heritage resources are conserved.
- Additionally, the subject site is adjacent to the heritage listed property at 1976 Oxford Street West. Compatibility with the adjacent heritage listed property must be assessed in the Heritage Impact Assessment.

2012 Oxford Street West
- The property at 2012 Oxford Street West (formerly Commissioners Road West) is often referred to as "Fairview Farm." The two storey buff brick Italianate style home was constructed in circa 1865. The property is believed to have historic associations with the Kilbourne family, who were very early settlers in the former Delaware Township.

1976 Oxford Street West
- The property at 1976 Oxford Street West (formerly Commissioners Road West) has a single storey cottage. Some sources note it as an example of a vernacular stone cottage that has since been painted. The property is believed to have built by R. Flint in about 1845. The property is also believed to have historic associations with the Timothy Kilbourne family.

PARKS PLANNING:
Bruce Page *Planning - Environmental and Parks Planning*

Natural Heritage
- The base mapping on the submitted plan does not accurately reflect the existing vegetation. The base mapping is to be updated for the FPR.
- A number of natural heritage features have been identified on the subject land including a woodlot and a potential wetland. A subject land status report and potential EIS will be

required as part of the FPR. The SLSR and EIS are to be scoped with the City prior to the applicant undertaking the studies.
- A tree preservation report and plan shall be completed for the application. The tree preservation report and plan shall be focused on the preservation of quality specimen trees within lots and blocks. The tree preservation report and plan shall be completed in accordance with current approved City of London guidelines for the preparation of tree preservation reports and tree preservation plans, to the satisfaction of the Manager of Environmental and Parks Planning as part of the design studies submission. Tree preservation shall be established first and grading/servicing design shall be developed to accommodate maximum tree preservation. The report will also identify the locations for tree preservation fencing to protect existing.

Parks Planning and Open Space
- Parkland dedication will be calculated at 5% of the total site area or 1ha per 300 residential units, whichever is greater. Based on ecological findings, staff may accept natural heritage lands at a compensated rated as defined in By-law CP-9. The balance of parkland dedication could be satisfied through cash-in-lieu of parkland
- The FPR should include a section on pedestrian connectivity within and external to the site. Specifically, this section should speak to connections to the residential lands to the east and Oxford Street to the North.

WASTEWATER & DRAINAGE ENGINEERING:
Kevin Graham *Senior Technologist*

- The site is tributary to the Riverbend Pumping Station and is located within the Oxford WTP sanitary sewershed.
- In accordance with GMIS the outlet will be the Trunk Sanitary sewer RBB1 which is currently being designed and constructed as part of the Eagle Ridge Phase 2 Subdivision to the limit of Kains Road.
- Any extension of an external sanitary on Gideon/Oxford to the trunk sanitary sewer RBB1 will need to be appropriately sized to accommodate external areas including lands outside the UGB. The Owner is to include adequate detail on an external sanitary area plan to reflect what is to be serviced to the oversized sanitary sewer.
- The Owner may wish to discuss and co-ordinate with Development Finance regarding any potential oversizing claimability for extension of external sanitary sewers

WATER ENGINEERING:
Ryan Armstrong *Technologist II*

- The City would not support a secondary watermain on Gideon Drive to service this Plan. If a subdivision water service connection is off Gideon Drive the existing 100mm watermain would be required to be replaced with a new adequately sized watermain. Sizing of this replacement watermain would need to avoid any potential adverse impacts on the Woodhull Subdivision, to which this 100mm watermain provides water servicing.
- Provision for temporary water servicing would be required in the event the existing Gideon Drive watermain is taken out of service for any extended period.

- While the Oxford Street West 300mm watermain will ultimately be looped with the development of Eagle Ridge Subdivision Phase 2, the Gideon Drive watermain remains a single feed watermain with no opportunity for looping.
- The proposed Plan of Subdivision with 43 SFR and 83 townhouse (126 total units) would require watermain looping. A looping strategy would need to be developed in order to satisfy this looping requirement, which may include a secondary connection to Oxford St, reconfiguring the road network such that the local road connection (Street 'A') connects directly to Oxford St West (essentially flipping the Plan), strategic valving, etc.
- If a secondary water service connection is proposed the watermain would be required to be in either a municipal road allowance or a dedicated municipal servicing corridor; extension of a watermain through a multi-purpose easement would not be supported.

- The servicing strategy for the multi-family Block is for this Block to be serviced with water internal to the subdivision. At 83 units the Block's internal water servicing would also require a looped connection.

- The subject lands are not well serviced off the low-level distribution system. Ultimately these lands are considered for inclusion in a future extension of the high-level distribution system as set-out in the Wickerson Area Watermain Distribution System study dated November 2010 prepared by Stantec Consulting.

- Consideration needs to be given to how this Plan would ultimately connect into the future high-level system contemplated in the aforementioned study. This might include multiple road connections to future development lands to the south, provision for road extensions at the east and west limits of the Plan, connection to Oxford Street made as close to the east limit of the Plan as possible, the permanent\temporary nature of low-level watermain connections to Gideon Drive and Oxford Street, etc.

- Given the existing topography constraints, the fact that the lands are located within the Urban Growth Boundary, and that there is an adequately sized watermain (300mm on Oxford St W) available for connection, the City could consider individual Block\Unit\Lot water service booster pumps to ensure adequacy of domestic water pressure.
- Hydraulic modeling would need to identify the Lots\Blocks which require individual water booster pumps, the details thereof, and any other applicable considerations. Notifications and warning clauses would be included in the Subdivision Agreement, be registered on title of the applicable Lots\Blocks, and be included in all Agreements of Purchase and Sale.

- Notwithstanding individual domestic booster pumps for the Blocks\Units\Lots, the fire protection for the Plan itself must be available and able to satisfy minimum design requirements without boosting.

- Oversizing watermains to reduce friction loss would not be supported, the watermains shall be sized based on typical design requirements. Preliminary hydraulic modeling and pipe sizing has been included in the aforementioned Wickerson Area Watermain Distribution System study; water quality needs to be maintained (interim & ultimate).

- As this Plan is presently at the limit of the Urban Growth Boundary no watermain stub would be permitted on Street 'A' past Street 'B' (or otherwise to service 'external lands'); watermains would be extended in conjunction with future development proposals.

Complete Application Requirements – Water Servicing

As part of a complete Draft Plan of Subdivision application Water Engineering would require the following:

- A focused design study establishing a watermain looping strategy for the Plan of Subdivision and addressing how the internal watermains would ultimately be able to be incorporated into the future expansion of the high-level distribution system considered in the Wickerson Area Watermain Distribution System study, all to the satisfaction of the City Engineer.

STORMWATER MANAGEMENT:

Paul Titus *Senior Engineering Technologist*
Adrienne Sones *Environmental Services Engineer*

General Comments – Stormwater Management (SWM)

- Section 8.0 – Please make reference in the IPR that the proposed SWM/Storm Drainage strategy for this development will be in compliance with the following documents:
    a. Final Report – Functional Design of the Tributary 'C' Storm Drainage and Stormwater Management Servicing Works Downstream Thames River Subwatershed – Dated August 2015 by Matrix Solutions Inc.; and
    b. Municipal Class Environmental Study Report – Schedule 'C' – Storm/Drainage & Stormwater Management, Transportation & Sanitary Trunk Servicing Works for Tributary 'C', Downstream Thames Subwatershed – Dated December 2013 by AECOM
- Section 8.1 - Please provide a statement in this section stating that the proposed SWM/Storm Drainage Report for this development will include the analysis/modeling of the existing southerly ditch on Oxford Street West to confirm the 100 and 250 year major overland flow conveyance to the Thames River. Any required ditch conveyance improvements will be identified in the report and reflected in the detailed subdivision servicing drawings.
- Section 8.2 – Just to confirm the minor storm outlet requirements in this section; the developer shall be required to connect the local storm sewer system from this development northerly across Oxford Street West and connect into the future storm maintenance hole ST1/future 750 mm diameter storm sewer located on Kains Road within the proposed Eagle Ridge Phase 2 subdivision.
- Low Impact Development solutions (LIDs) are expected to be required under the new MECP guidelines to be released in 2018. Please include a statement that addresses the implementation of LIDs for this development.
- The applicant shall also provide the following as part of the complete submission package in support of the proposed SWM/Storm Drainage design:
    a. Hydrogeological Report including water balance analysis;

b. Geotechnical Report including detailed soil characteristics and ground water levels to support any proposed Low Impact Development (LID) solutions.

TRANSPORTATION PLANNING & DESIGN:
Andrew Giesen *Senior Transportation Technologist*

Note: The IPR noted a TIA was completed for this development, however this was not provided in the report, as part of the complete application this report should be provided for staff to review

- Road widening dedication of 24.0m from centre line required on Oxford Street West and Gideon Drive
- Provide a road layout and concept plan showing all bends tapers and centre line radii comply with City standards, ensure all through streets align opposite each other if minimum City standards are not met changes to the draft plan will be required
- As part of a complete application demonstrate how street "A" will function with a future roundabout at Oxford Street West and Gideon Drive
- Gateway widening required on Street "A" 21.5m ROW width for 30m tapered back over 30m to standard ROW width of 20.0m
- Provide a 1ft reserve along Oxford Street West and Gideon Drive
- 6.0mx6.0m daylight triangles will be required on Street "A" at Gideon Drive
- Left and right turn lanes will be required on Gideon Drive at Street "A"
- Temporary street lighting will be required at the intersection of Gideon Drive and Street "A"
- Barrier curb will be required throughout the subdivision
- Council recently approved the Complete Streets Design Manual found at the below web link, the complete streets design manual contains information and design guidance for the construction of a complete street. https://www.london.ca/residents/Roads-Transportation/Transportation-Planning/Pages/Complete-Streets-.aspx

DEVELOPMENT FINANCE
Greg LaForge *Manager I, Development Finance*

General
- Servicing of this development is dependent on completion of infrastructure projects that are subject to the timing of an adjacent subdivision and the GMIS. As part of the complete application, the owner shall provide a strategy and schedule that identifies the timing of the subdivision servicing. The strategy should clearly identify the expected timing of projects required to service these lands. If temporary works are required, these would be an Owner cost as per the Development Charges By-law. Any connections to external infrastructure would be an Owner cost and only eligible for an oversizing subsidy as per the Development Charges By-law.
- It is noted that current DC policies are under review as part of the 2019 Development Charges Background Study and are subject to review and Council approval.

Water
- If required, external watermains 300mm diameter or greater would be eligible for oversizing subsidy from the CSRF. All local watermains (250mm & less) and connections will be installed at the Owner's cost.

SWM
- There are no anticipated claims from the CSRF for stormwater management related infrastructure. The Initial Proposal Report indicates the development will be serviced through the existing Riverbend SWMF Trib. C SWMF A.
- If LID's are required, these works are currently considered an Owner cost. As part of the 2019 Development Charges Study, the City is reviewing the eligibility of LID's as a DC recoverable item.

Storm
- There are no anticipated claims from the CSRF for subsidy on oversized storm sewers (sewers exceeding 1050mm). All local sewers and connections will be installed at the Owner's cost.

DEVELOPMENT ENGINEERING:

Ismail Abushehada *Manager, Development Engineering*
Blair Hammond *Senior Engineering Technologist*
Paul Di Losa *Technologist II*

STANDARD COMMENTS:

- All the usual standard conditions of draft plan will be imposed;
- Cost sharing for any eligible services or facilities will be based on the most financially economical solution for the claim, unless agreed to otherwise by the City; and
- External land needs are to be addressed as necessary (e.g. utility corridors, public roads, construction roads, emergency access etc.).

INITIAL PROPOSAL REPORT COMMENTS:

The following are comments on the Internal Proposal Report:

- Noting Block 3 is isolated from the rest of the draft plan due to the adjacent hydro corridor. In the event that Block 3 is not developed as a SWMF and approval is received to develop the block as a high density residential area, a concept is to be provided identifying how it will interact/tie-in with the adjacent road network, hydro corridor, pathway system and subdivision;
- The Hydro Corridor is owned by Hydro One Networks Inc., as such any work that is proposed within the corridor will require their permission. An easement is required over any proposed servicing that is to be constructed within the corridor. Lastly, the corridor appears to be included within the proposed subdivision's subject lands on the draft plan that was provided. Please revise the drawing to properly delineate the corridor as external to the draft plan;

9.0 Transportation

- Internal center medians are no longer permitted (i.e. gateway treatments) on municipal ROW's unless they are aligning with existing medians;
- FYI, minor external roadwork projects will be designed by the applicant but tendered by the City (only the associated engineering is claimable);

DRAFT PLAN OF SUBDIVISION DRAWING COMMENTS:

The draft plan of subdivision drawing is to comply with all City standards with regard to the above comments and the following:

Draft plan of subdivision is to include various existing features:

- Topographical information (e.g. contours, elevations, vegetation areas, water courses, wells, utility corridors, and flood plain limits)
- Legal info of this plan and adjoined lands (e.g. easements, lot and plan numbers, addresses, and adjacent streets)
- Proposed road curvature and radii to comply with City standards
- Tapers / transitions
- Road widening's
- Dimension all right of way's including window streets
- Daylighting triangles where applicable
- 0.3m reserves and road dedications as necessary
- Lot Frontages
- Block Areas
- Drawing to scale
- North arrow, etc.

Complete Application Requirements

- The Final Proposal Report addressing all Development Services comments with respect to the IPR
- Revised proposed Draft Plan of Subdivision drawing as per Development Services comments.
- Provide a Geotechnical

EXTERNAL COMMENTING AGENCIES

Ministry of Natural Resources and Forestry (MNRF)

Karina Černiavskaja *District Planner – Aylmer District*

(No comments Rec'd)

UNION GAS LTD.

Justin Cook *Senior Pipeline Engineer*

(No comments Rec'd)

LONDON TRANSIT COMMISSION (L.T.C.)

Daniel Hall *Transportation Planning Technician*

(No comments Rec'd)

THAMES VALLEY DISTRICT SCHOOL BOARD

Danielle Kettle *Planning Analyst*

(No comments Rec'd)

LONDON DISTRICT CATHOLIC SCHOOL BOARD

Rebecca McLean *Planning Specialist*

(No comments Rec'd)

LONDON-MIDDLESEX HEALTH UNIT

Bernadette McCall *Public Health Nurse*

(No comments Rec'd)

UPPER THAMES RIVER CONSERVATION AUTHORITY (U.T.R.C.A.)

Christine Creighton *Land Use Planner*

(Comments rec'd via email & attached)

The Upper Thames River Conservation Authority (UTRCA) has reviewed the initial proposal report (IPR) with regard for the policies in the *Environmental Planning Policy Manual for the Upper Thames River Conservation Authority (June 2006).* These policies include regulations made pursuant to Section 28 of the *Conservation Authorities Act,* and are consistent with the natural hazard and natural heritage policies contained in the *Provincial Policy Statement (2014).* The *Upper Thames River Source Protection Area Assessment Report* has also been reviewed in order to confirm whether the subject lands are located in a vulnerable area. The Drinking Water Source Protection information is being disclosed to the Municipality to assist them in fulfilling their decision making responsibilities under the Planning Act.

CONSERVATION AUTHORITIES ACT

While the subject lands are regulated by the UTRCA in accordance with Ontario Regulation 157/06, made pursuant to Section 28 of the *Conservation Authorities Act,* the proposed development lands are not regulated.

The regulation limit which impacts the balance of the lands is comprised of wetland features and the surrounding areas of interference. The UTRCA has jurisdiction over lands within the regulated area and requires that landowners obtain written approval from the Authority prior to undertaking any site alteration or development within this area including filling, grading, construction, alteration to a watercourse and/or interference with a wetland.

UTRCA ENVIRONMENTAL PLANNING POLICY MANUAL

The UTRCA's Environmental Planning Policy Manual is available online at:

http://thamesriver.on.ca/planning-permits-maps/utrca-environmental-policy-manual/

Policies which are applicable to the subject lands include:

3.2.2 General Natural Hazard Policies

These policies direct new development and site alteration away from hazard lands. No new hazards are to be created and existing hazards should not be aggravated. The Authority also does not support the fragmentation of hazard lands through lot creation which is consistent with the Provincial Policy (PPS).

3.2.6 & 3.3.2 Wetland Policies

New development and site alteration is not permitted in wetlands. Furthermore, new development and site alteration may only be permitted in the area of interference and /or adjacent lands of a wetland if it can be demonstrated through the preparation of an Environmental Impact Study that there will be no negative impact on the hydrological and ecological function of the feature.

DRINKING WATER SOURCE PROTECTION

Clean Water Act

The *Clean Water Act* (CWA), 2006 is intended to protect existing and future sources of drinking water. The Act is part of the Ontario government's commitment to implement the recommendations of the Walkerton Inquiry as well as protecting and enhancing human health and the environment. The CWA sets out a framework for source protection planning on a watershed basis with Source Protection Areas established based on the watershed boundaries of Ontario's 36 Conservation Authorities. The Upper Thames River, Lower Thames Valley and St. Clair Region Conservation Authorities have entered into a partnership for The Thames-Sydenham Source Protection Region.

The Assessment Report for the Upper Thames watershed delineates three types of vulnerable areas: Wellhead Protection Areas, Highly Vulnerable Aquifers and Significant Groundwater Recharge Areas. We wish to advise that the subject lands are identified as being within a vulnerable area. Mapping which shows these areas is available at:

http://maps.thamesriver.on.ca/GVH_252/?viewer=tsrassessmentreport

Provincial Policy Statement (PPS, 2014)

Section 2.2.1 requires that *"Planning authorities shall protect, improve or restore the quality and quantity of water by: e) implementing necessary restrictions on development and site alteration to:*

1. *protect all municipal drinking water supplies and designated vulnerable areas; and*
2. *protect, improve or restore vulnerable surface and ground water features, and their hydrological functions.*"

Section 2.2.2 requires that "*Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored*."

Municipalities must be consistent with the Provincial Policy Statement when making decisions on land use planning and development. Policies in the *Approved Source Protection Plan* may prohibit or restrict activities identified as posing a *significant threat* to drinking water. Municipalities may also have or be developing policies that apply to vulnerable areas when reviewing development applications. Proponents considering land use changes, site alteration or construction in these areas need to be aware of this possibility. The *Approved Source Protection Plan is available at:*

http://www.sourcewaterprotection.on.ca/source-protection-plan/approved-source-protection-plan/

Comments on the IPR

P.4 The London Plan and P. 11 Analysis of the London Plan Policies – consideration should also be given to Map 5 Natural Heritage and the related policies which identify an unevaluated vegetation patch on the development site. We understand that the City will be requesting an environmental study to evaluate this feature. The UTRCA requests an opportunity to review the study in order to confirm whether there are any wetland features located within the patch that could be subject to our regulation and Section 28 permit process.

RECOMMENDATION

As indicated, in accordance with Ontario Regulation 157/06, made pursuant to Section 28 of the *Conservation Authorities Act,* the proposed development lands are not regulated. However, the UTRCA requests an opportunity to review the environmental study/SLSR that we understand the City will be requesting as part of a complete application in order to confirm whether there are any wetland features located within the unevaluated vegetation patch which could be subject to our regulation.

REQUIREMENTS TO PROCEED WITH CURRENT APPLICATION

New City of London Complete Application Requirements for Planning Act Applications

All new applications submitted on or after January 22, 2018 will be required to meet the new requirements for the relevant application type. These applications must be submitted using the updated application forms dated January 2018 which will appear on the City's website in early January.

The new requirements are in addition to any technical submission requirements you are currently required to meet, and are as follows:

Draft Plan of Subdivision
A simplified draft plan of subdivision is required for the production of the on-site sign.
The graphic must be sized to the dimensions of 46”(W) x 46(H), provided in PDF and JPEG format at a DPI of 300.

The subdivision must be centred and scaled within the 46” bounding box to allow for maximum readability. The area outside of the draft plan of subdivision must be populated with Ontario Base Map data to provide context for the surrounding land. This additional contextual information should be displayed at a lighter transparency and contain information such as, but not limited to: streets, parcel fabric, building outlines, and watercourses. The images should be full bleed with no borders. The image must not be distorted or skewed in any way and is subject to cropping.

The simplified image of the proposed subdivision must include the following elements:
- Outline the extent of the subdivision boundary
- Road, lot, and block fabric and descriptions
- Proposed street name labels
- Proposed block numbers & area calculations
- Colour application to all lots and blocks per The London Plan colours (see Map I for relevant place types and colour standards)
- Light grey colour application to all street and walkway blocks
- Basic map elements: (north arrow, scale, etc.)

Official Plan and/or Zoning By-Law Amendment (applicable only where Renderings are required as part of a complete application)
Proposed Development best represented using a landscape image format Graphic renderings are required which represent the conceptual design of the proposal for the production of the on-site sign.

A minimum of 2 renderings must be provided, oriented in landscape format and sized to the dimensions of 48”(W) x 26”(H), provided in PDF and JPEG format at a DPI of 300.

These renderings should be an accurate visual representation of the proposal and highlight features of the conceptual design. The images should be full bleed with no borders. The image must not be distorted or skewed in any way and is subject to cropping.

OR

Proposed Development best represented using a portrait image format
Graphic renderings are required which represent the conceptual design of the proposal for the production of the on-site sign.

A minimum of 2 renderings must be provided, oriented in portrait format and sized to the dimensions of 14”(W) x 26”(H), provided in PDF and JPEG format at a DPI of 300.
AND

A minimum of 3 renderings must be provided, oriented in landscape format and sized to the dimensions of 34”(W) x I 3”(H), provided in PDF and JPEG format at a DPI of 300.
The landscape images are typically, but not always, of the pedestrian level of a tall building.

These renderings should be an accurate visual representation of the proposal and highlight features of the conceptual design. The images should be full bleed with no borders. The image must not be distorted or skewed in any way and is subject to cropping.

The following documentation is required for a complete application submission:
NOTE:

- **Draft Plan of Subdivision Application:**
  - 1 copy of the City of London Subdivision Application Form.
  - 24 rolled copies of the Draft Plan, completed as required under Section 51(17) of the Planning Act (the Draft Plan must include the Approval Authority signature block)
  - A digital file of the Draft Plan tied to the City’s geographic horizontal control network (NAD 1983 UTM Zone 17N) must be submitted as well (refer to the City’s Plans Submission Standards available on-line).
  - 1 legal sized copy of the Draft Plan.
  - Associated application fees

Draft plan of Subdivision is to include various features listed on the Draft Plan of Subdivision Application Form

- **Official Plan Amendment Application**
  - 2 copies of completed City of London Zoning By-law Amendment application form and supporting documentation
  - Hard copy and digital file of proposed zoning map
  - Associated application fees

- **Zoning By-law Amendment Application:**
  - 2 copies of completed City of London Zoning By-law Amendment application form and supporting documentation
  - Hard copy and digital file of proposed zoning map
  - Associated application fees

- **Final Proposal Report (FPR) & Reports/Studies Required:**
  - Update the Initial Proposal Report to reflect the comments that have been identified in this Record of Consultation, in accordance with the requirements prescribed in the File Manager Reference Manual.
  - FPR is to include updated water, sanitary, stormwater, transportation and development finance components, parks and open space, and addressing all comments identified in the Record of Consultation (*Note: applicant/consultant should undertake off-line discussions with contacts prior to completing the FPR, to ensure all servicing requirements are suitably addressed*)
  - Final Proposal Report which fully addresses the polices of the Official Plan, the Southwest Area Secondary Plan, and the London Plan (and specifically addresses the intensification policies mentioned above)
  - Provide a road layout and concept plan showing all bends tapers and centre line radii comply with City standards, ensure all through streets align opposite each other if minimum City standards are not met changes to the draft plan will be required.
  - A Heritage Impact Assessment
  - Scoped Subject Land Status Report and Environmental Impact Study
  - Tree Preservation Report
  - Water Servicing Strategy (Watermain looping and internal watermains)
  - Hydrogeological Report including water balance analysis
  - Geotechnical Report
  - Transportation Impact Assessment
  - Demonstrate how Street A will function with future round about (Oxford Street West and Gideon Drive)

Rob Carnegie

Prepared By:
Rob Carnegie *Proposal Review Meeting Coordinator, Development Planning*
(519) 661-CITY (2489) ext. 2787 RCarnegie@london.ca

Reviewed By:
Sonia Wise *Senior Planner, Development Planning*
(519) 661- CITY (2489) ext. 4579 SWise@london.ca

Approved By:
Lou Pompilii *Manager, Development Planning*
(519) 661- CITY (2489) ext. 5488 LPompilii@london.ca

UPPER THAMES RIVER
CONSERVATION AUTHORITY

"Inspiring a Healthy Environment"

The Thames
A Canadian
Heritage River

September 12, 2018

City of London - Development Services
P.O. Box 5035
London, Ontario N6A 4L9

Attention: Rob Carnegie (sent via e-mail)

Dear Mr. Carnegie:

Re: UTRCA Comments on IPR – September 12, 2018 Proposal Review Meeting
Owner/Applicant: Orange Rock Developments – Jonathon Aarts
Agent: Stantec Consulting Ltd.
14 Gideon Drive & 2012 Oxford Street West, London, Ontario

The Upper Thames River Conservation Authority (UTRCA) has reviewed the initial proposal report (IPR) with regard for the policies in the *Environmental Planning Policy Manual for the Upper Thames River Conservation Authority (June 2006).* These policies include regulations made pursuant to Section 28 of the *Conservation Authorities Act,* and are consistent with the natural hazard and natural heritage policies contained in the *Provincial Policy Statement (2014).* The *Upper Thames River Source Protection Area Assessment Report* has also been reviewed in order to confirm whether the subject lands are located in a vulnerable area. The Drinking Water Source Protection information is being disclosed to the Municipality to assist them in fulfilling their decision making responsibilities under the Planning Act.

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DRINKING WATER SOURCE PROTECTION

Clean Water Act

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Comments on the IPR

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RECOMMENDATION

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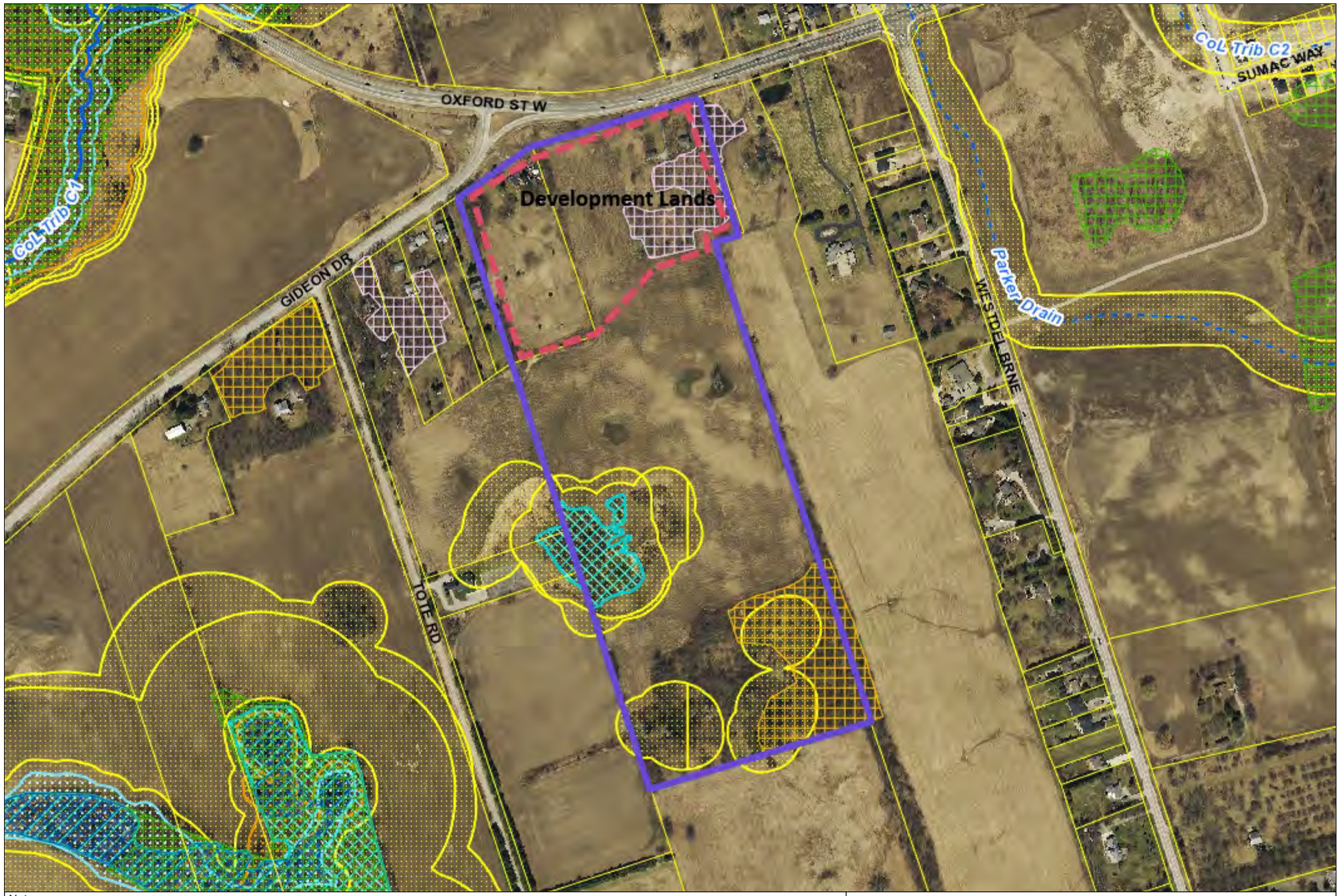
Thank you for the opportunity to comment. Please contact the undersigned at extension 293 if there are any questions.

Yours truly,
UPPER THAMES RIVER CONSERVATION AUTHORITY

Christine Creighton
Land Use Planner
CC/cc

Enclosure – Regulation Mapping (please print on legal size paper to ensure that the scales are accurate)

c.c. UTRCA - Mark Snowsell & Brent Verscheure, Land Use Regulations Officers



Regulation Limit

Regulation under s.28 of the *Conservation Authorities Act*

Development, interference with wetlands, and alterations to shorelines and watercourses. O.Reg 157/06, 97/04.

Legend

- Assessment Parcel (MPAC)
- Watercourse
  - Open
  - Tiled
- Middlesex NHSS Woodland (2014)
  - Candidate for Ecologicallly Important
  - Ecologicallly Important
  - Significant Ecologicallly Important
- Wetlands (MNR)
  - Evaluated-Provincial
  - Evaluated-Other
  - Not Evaluated
- Wetland Hazard
- Flooding Hazard
- Erosion Hazard
- Regulation Limit 2015
- Regulation Limit (2006, Historic)

The Regulation Limit depicted on this map schedule is a representation of O.Reg 157/06 under O.Reg 97/04.

The Regulation Limit is a conservative estimation of the hazard lands within the UTRCA watershed. In the case of discrepancies between the mapping and the actual features on a property, the text of Ontario Regulation 157/06 prevails and the jurisdiction of the UTRCA may extend beyond areas shown on the maps.

The UTRCA disclaims explicitly any warranty, representation or guarantee as to the content, sequence, accuracy, timeliness, fitness for a particular purpose, merchantability or completeness of any of the data depicted and provided herein.

The UTRCA assumes no liability for any errors, omissions or inaccuracies in the information provided herein and further assumes no liability for any decisions made or actions taken or not taken by any person in reliance upon the information and data furnished hereunder.

This map is not a substitute for professional advice. Please contact UTRCA staff for any changes, updates and amendments to the information provided.

This document is not a Plan of Survey.

UPPER THAMES RIVER CONSERVATION AUTHORITY

Notes:
14 Gideon Drive & 2012 Oxford Street West, London

Created By: CC September 11, 2018

* Please note: Any reference to scale on this map is only appropriate when it is printed landscape on legal-sized (8.5" x 14") paper.

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metres
1:5,367

N

Appendix B

Email Correspondence

Laura McLennan

From: Dave Hayman
Sent: Tuesday, May 28, 2019 11:43 AM
To: Laura McLennan
Subject: FW: 14 Gideon & 2012 Oxford

Email chain below. Bruce said Scoped EIS, james wants SLSR.

Dave Hayman M. Sc.
BioLogic Incorporated
110 Riverside Drive, Suite 201
London ON N6H 4S5
Direct: 519 657 0299
Office: 519 434 1516 x 106
Fax: 519 434 0575

Windsor: 519 966 1645

From: MacKay, James [mailto:jmackay@london.ca]
Sent: Wednesday, December 05, 2018 10:26 AM
To: Dave Hayman <dhayman@biologic.ca>; Page, Bruce <BPAGE@London.ca>; 'Jonathan Aarts' <jonaarts@j-aar.com>; Hendriksen, Chris <Chris.Hendriksen@stantec.com>
Cc: Pompilii, Lou <LPompili@London.ca>
Subject: RE: 14 Gideon & 2012 Oxford

Hi Dave, based on your availability we will have to set up a scoping meeting in January after the holidays. Please note that the feature is shown as an unevaluated vegetation patch on Map 5 of the London Plan and no site specific appeal was made for this site as far as I am aware. In addition, while not on the current Schedule B1, the entire patch is greater than 0.5 ha and therefore an evaluation of significance is required as per OP policy 15.4.14/ 15.4.13 / 15.4.5 / 15.4.5.1 to determine if it is a Significant Woodland. There is also the possibility of Endangered Species on the sites in the (woodland and field habitat that I have noted on the air photos and will require further study. Also, I note on Schedule B1 that the site is within a Ground Water Recharge area and will need to include the UTRCA in the scoping meeting. Let's find a date in January that will work for all of us to scope out SLSR requirements to determine if any Significant Natural Heritage features are present that need to be delineated for an EIS.

At your earliest convenience let me know some dates that will work for you in January.

Regards,

James MacKay, M.Sc.
Ecologist
ISA Certified Arborist
City of London, Planning Services
Environmental and Parks Planning
T: (519) 661-CITY (2489) ext. 4865 | F: (519) 963-1483 | E: jmackay@london.ca

---

From: Dave Hayman [mailto:dhayman@biologic.ca]
Sent: Wednesday, December 5, 2018 9:25 AM
To: Page, Bruce <BPAGE@London.ca>; 'Jonathan Aarts' <jonaarts@j-aar.com>; Hendriksen, Chris <Chris.Hendriksen@stantec.com>
Cc: MacKay, James <jmackay@london.ca>; Pompilii, Lou <LPompili@London.ca>
Subject: RE: 14 Gideon & 2012 Oxford

Thanks for the clarification Bruce. I was confused when a woodland and wetland were mentioned as they are not on the subject lands. The woodland discussed is also not on the current OP schedules following the area plan studies for region. A residential designation was placed on the property and there are no Natural Heritage features shown on Map B1.

The woodland in question is actually residential trees with mowed lawn below.

We were anticipating the only issue for this site would be ESA clearance (a process we have started with MNRF) and tree preservation report (the east half of the woodland is not part of this application.

If you feel it is still necessary to meet, I am available on the 7th this week and the 11th am or anytime on the 12-14th.

Dave Hayman, MSc.
BioLogic Incorporated
110 Riverside Drive, Suite 201
London, ON N6H 4S5

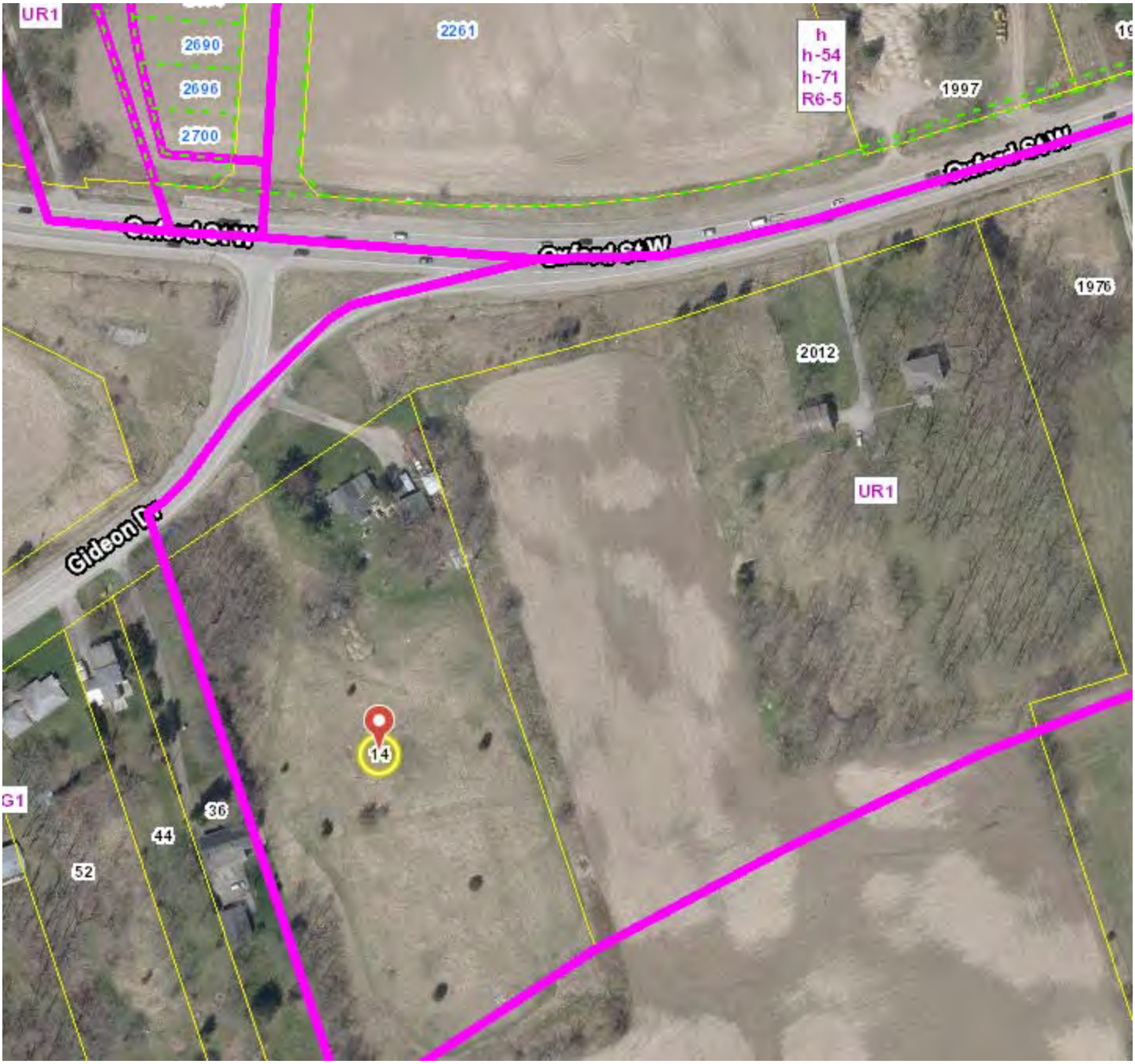
Direct: 519 657 0299
Office: 519 434 1516 x 106
Fax: 519 434 0575

Windsor: 519 966 1645

From: Page, Bruce [mailto:BPAGE@London.ca]
Sent: December-05-18 9:05 AM
To: 'Jonathan Aarts' <jonaarts@j-aar.com>; Hendriksen, Chris <Chris.Hendriksen@stantec.com>; Dave Hayman <dhayman@biologic.ca>
Cc: MacKay, James <jmackay@london.ca>; Pompilii, Lou <LPompili@London.ca>
Subject: RE: 14 Gideon & 2012 Oxford

Good morning,

The scoped EIS is not for lands outside of the development application but for lands within. As can be seen by the attached air photo there are a number of trees on the east side of the site and a small pocket on the west. Please advise when you would like to meet to scope out the required studies.



Thanks

Bruce Page
Senior Planner, Parks and Open Space Design
267 Dundas Street, 3rd Floor, London, ON, N6A 1H2
P: 519.661.2489 x 5355 | | Fax: 519. 963.1483
bpage@london.ca | www.london.ca

From: Jonathan Aarts [mailto:jonaarts@j-aar.com]
Sent: Tuesday, December 04, 2018 2:14 PM
To: Hendriksen, Chris <Chris.Hendriksen@stantec.com>; Page, Bruce <BPAGE@London.ca>; Dave Hayman <dhayman@biologic.ca>
Subject: 14 Gideon & 2012 Oxford

Bruce.

Please see attached. The area in red is the area for application. We recognize that there are some woods and low lying areas to the south of the proposed development. Why do we need a scoped EIS or SLSR for areas outside of the development area?

Jonathan Aarts
Partner & Director
J-AAR Excavating Ltd.
O:519.652.2104 x408

Appendix B1

EIS Issues Summary Checklist Report

APPENDIX A

Environmental Impact Study
ISSUES SUMMARY CHECKLIST REPORT

Application Title: 14 Gideon and 2012 Oxford Street

Date Submitted: June 2, 2020

Proponent: 1926767 Ontario Ltd

Qualifications

Primary Consultant: Stantec

Key Contact Person: Chris Hendriksen

Other Consultants/ field personnel:

Hydrogeology/ Hydrology:

Biological – Flora: MTE Consultants

Biological – Fauna: MTE Consultants

Other:

Context for Background Information

Subwatershed: Downstream Thames

Tributary Fact Sheet Number:

Planning / Policy Area: Riverbend

Technical Advisory Review Team

- ☑ Ecologist Planner — James MacKay
- ☑ Planner for File — New planner to be assigned
- ☑ EEPAC — Sandy Levin
- ☑ Conservation Authority — UTRCA
- ☑ Ministry of Natural Resources — & MECP - N/A
- ☐ Ministry of Municipal Affairs and
- ☐ Ministry of Agriculture and

☐ **Other Review Groups (e.g., Community Associations, Field**

1.0 DESCRIPTON OF THE ENVIRONMENT (Features)

Purpose: To have a clear understanding of the current status of the land, and the proposed "development" or land use change.

1.1 Mapping (Location and Context)

Current aerial photography

☑ Land Use – Excerpts of the Official Plan for the City of London Ontario Schedules A, B, showing a 5-10 km radius of subject site
☑ Terrain setting @ 1:10,000 – 1:15,000 scale showing landscape features, subwatershed divides
☑ Existing Environmental Resources showing @1:2,000 – 1:5,000 showing Vegetation, Hydrology, contours, linages.
☑ Environmental Plan or Strategy from Subwatershed reports (tributary fact sheet), Community (Area) Plans, or other

1.2 Description of Site, Adjacent lands, Linage with Natural Heritage System

List all supporting studies and reports available to provide background summary (e.g. subwatershed, hydrological, geo-technical, natural heritage etc.).

- Riverbend Community Plan (2001), EIS reference if available. + Tributary 'C' studies if apr

Check the first box if the information is relevant and required as part of this study. Check the second box if sufficient data is available.

1.2.1 Terrain Setting

☑	☑	Soils (surface and subsurface)
☑	☑	Glacial geomorphology – landform type
☑	☑	Subwatershed

☑	☑	Topographic features
☑	☑	Ground water discharge
☑	☑	Shallow ground water/baseflow
☑	☑	Ground water discharge/aquifer
☐	☐	Aggregate resources

1.2.2 **Hydrology**

☑	☑	Hydrological catchment boundary
☑	☑	Surface drainage pattern
☑	☑	Watercourses (Permanent, Intermittent)
☑	☑	Stream order (Headwater, 1st, 2nd, 3rd or higher)
☑	☑	Agricultural Drains
☑	☑	Downstream receiving watercourse
☑	☑	Hazard Line (Map 6)

1.2.3 **Natural Hazards**

☑	☑	100 year Erosion Line
☑	☑	Floodline mapping
☑	☑	Max line mapping CTRCA mapping + text based regulated areas

1.2.4 **Vegetation**

☑	☑	Vegetation Patch Number
☑	☑	System (Terrestrial, Wetland, Aquatic)
☑	☑	Cover (Open, Shrub, Treed)
☑	☑	Community Type(s)
☑	☑	ELC Community Class (Bluff, Forest, Swamp, Tallgrass Prairie, Savannah & Woodland, Fen, Bog, Marsh, Open Water, Shallow Water)
☑	☑	ELC Community Series
☑	☑	Rare Vegetation Communities

1.2.5 **Flora**

☑ ☑ Flora (inventory dates, source)

3 completed April 17, May 29, June 5, June 20, Aug 21, Sept 21 2018

☑ ☑ Rare flora (National, Provincial, Regional)

NHIC database. MNRF/MECP, Oldham 2017

1.2.6 **Fauna**

☑ ☑ Fauna (Inventory dates; sources)

Bat habitat assessment

☑ ☑ Breeding Birds

June 5 and June 20, 2018 & MNRF/MECP protocols if required.

☑ ☑ Migratory Birds | May 9, 2018

☑ ☑ Amphibians | April 21, 2018 no woke - Present at next site visit - vernal pool.

☑ ☑ Reptiles

Incidental

☑ ☑ Mammals | other incidental

☑ ☑ Butterflies | incidental

☑ ☑ Odonata | incidental

☐ ☐ Other

☑ ☑ ~~Bird Species of Conservation Priority~~ PIF birds

☑ ☑ Rare Fauna

95 above

1.2.7 **Wildlife Habitat**

- [x] [ ] Species-At-Risk Regulated Habitat critical habitat mapping
- [ ] [ ] Winter habitat for deer, wild turkey
- [ ] [ ] Waterfowl Habitat (wetlands, poorly drained landscape – bottomlands, beaver ponds, seasonally flooded areas, staging areas, feeding areas)
- [ ] [ ] Colonial Birds Habitat
- [x] [ ] Hibernacula
- [x] [ ] Habitat for Raptors
- [x] [ ] Forests with springs or seeps
- [x] [ ] Ephemeral ponds
- [x] [ ] Wildlife trees (snags, cavities, x-large trees > 65 cm DBH)
- [ ] [ ] Forest Interior Birds
- [x] [ ] Area-sensitive birds

1.2.8 **Aquatic Habitat**
(SWS Aquatic Resources Management Reports)

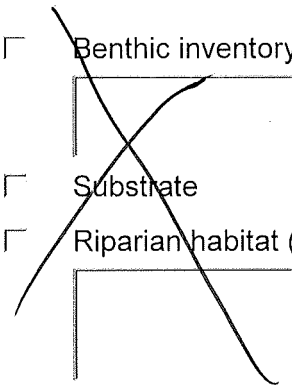
- [ ] [ ] Fish communities
- [ ] [ ] Fish spawning areas
- [ ] [ ] Fish migration routes
- [ ] [ ] Thermal refuge for fish

none required as indicated by UTRCA

☐ ☐ Benthic inventory

☐ ☐ Substrate

☐ ☐ Riparian habitat (extent and type)



1.2.9 **Linkages and Corridors**

(The diversity of natural features in an area, and the natural connections between them should be maintained, and improved where possible. PPS 2.3.3)

☐ ☐ Valleylands

☐ ☐ Significant Watercourses (Thames River, Stoney Creek, Medway Creek, Dingman Creek, Pottersburg Creek, Wabuno Creek, Mud Creek, Stanton Creek (Drain), Kelly Creek (Drain)

☑ ☐ Upland Corridors / species migration routes

☐ ☐ Big Picture Cores and Corridors

☐ ☐ Linkages between aquatic and terrestrial areas (riparian habitat, runoff)

☐ ☐ Groundwater connections

☑ ☐ Patch clusters (mosaic of patches in the landscape)

1.3 Social Values

1.3.1 **Human Use Values**

☐ ☐ Recreational linkages for hiking, walking

☑ ☐ Nature appreciation, aesthetics

☐ ☐ Education, research

☐ ☐ Cultural / traditional heritage

☐ ☐ Social (parks and open space)

☐ ☐ Resources Products (e.g. timber, fish, furbearers, peat)

☐ ☐ Aggregate Resources

1.3.2 **Land Use - Cultural**

- ☐ ☐ Archaeological (pre 1500)
- ☐ ☐ Historical (post 1500 – present)
- ☐ ☐ Adjacent historical and archeological
- ☐ ☐ Future

Std. Study as per requirements

1.3.3 **Land Use - Active**

- ☐ ☐ Archaeological (pre 1500)
- ☐ ☐ Historical (post 1500 – present)
- ☐ ☐ Adjacent historical and archeological
- ☐ ☐ Future

1.3.4 **Other**

2.0 EVALUATION OF SIGNIFICANCE

Components of the Natural Heritage System

The policies in Section 15.4 apply to recognized and potential components of the natural heritage system as delineated on Schedule 'B' or features that may be considered for inclusion on Schedule 'B'. They also address the protection of environmental quality and ecological function with respect to water quality, fish habitat, groundwater recharge, headwaters and aquifers.

☑ **A component of a Subject Lands Status Report that is required to be included in the EIS is the evaluation of significance of all potential natural heritage features and areas recognized by In-force London Plan policies and/ or Official Plan policies.**

☑ **A component of a Subject Lands Status Report that is required to be included in the EIS is the confirmation and mapping of boundaries of all natural heritage features and areas.**

2.1 Environmentally Significant Areas

- ☐ Identified Environmentally Significant Areas (ESA)

Name

☐ Potential ESAs – Expansion of an Existing ESA

Name

☐ Potential ESA – Area not associated with an existing ESA

Name

2.2 Wetlands

☐ Provincially Significant Wetlands

Name

☐ Wetlands

Name

☐ Unevaluated Wetlands

2.3 Areas of Natural and Scientific Interest

☐ Provincial Life Science ANSI

☐ Regional Life Science ANSI

☐ Earth Science ANSI

2.4 Habitat of Species-At-Risk (SAR)

☑ Endangered

☑ Threatened

☑ Vulnerable / Special Concern

2.5 Woodlands and Vegetation Patches

☐ Significant Woodlands

☑ Unevaluated Vegetation Patches and/ or patches > 0.5ha

2.6 Corridors and Linkages

☐ River, Stream and Ravine Corridors

☐ Upland Corridors

☐ Naturalization and Anti-fragmentation Areas

3.0 IDENTIFICAITON AND DESCRIPTION OF FUNCTIONS

Ecological Functions the natural processes, products or services that species and non-living environments provide or perform within or between ecosystems and landscapes. Check those functions that will be required to assess for the study (key and supporting functions).

3.1 **Biological Functions**

☑ Habitat (provision of food, shelter for species)

- [x] Limiting habitat
- [x] Species life histories (reproduction and dispersal)
- [ ] Habitat guilds
- [ ] Indicator species
- [ ] Keystone species
- [x] Introduced species
- [ ] Predation / parasitism
- [x] Population dynamics
- [ ] Vegetation structure, density and diversity
- [ ] Food chain support
- [ ] Productivity
- [x] Diversity
- [ ] Carbon cycle
- [ ] Energy cycling
- [x] Succession and disturbance processes
- [x] Relationships between species and communities

3.2 **Hydrological and Wetland Functions**

- [ ] Groundwater recharge and discharge (hydrogeology)
- [ ] Water storage and release (fluvial geomorphology)
- [x] Maintaining water cycles (water balance)
- [x] Water quality improvement
- [ ] Flood damage reduction
- [ ] Shoreline stabilization / erosion control
- [ ] Sediment trapping
- [ ] Nutrient retention and removal / biochemical cycling
- [ ] Aquatic habitat (fish, macroinvertebrates)

3.3 **Landscape Features and Functions**

- [x] Size
- [x] Connections, corridors and linkages
- [x] Proximity to other areas / natural heritage features (e.g. woodlands, wetlands, valleylands, water, etc.)
- [x] Fragmentation

3.4 **Functions, Benefits and Values of Importance to Humans**

- ☑ Contributing to healthy and productive landscapes
- ☐ Improving air quality by supplying oxygen and absorbing carbon dioxide
- ☐ Converting and storing atmospheric carbon
- ☐ Providing natural resources for economic benefit
- ☐ Providing green space for human activities
- ☑ Aesthetic and quality-of-life benefit
- ☑ Environmental targets and/or environmental management strategies

4.0 ADDITIONAL COMPONENTS AND NOTES

- EIS to show and demonstrate conformity with the Provincial Policy Statement (2020), in-force London Plan (as of Nov. 2019) policies, and current Official Plan policies (1989), Environmental Management Guidelines (2006).
- EIS to address buffers if required, additional mitigation and/or compensation based on the proposed development. Note that discussion at the meeting around compensation of identified existing woodland cover to features located on subject property (but outside the study area) is potentially a viable option in this case and to be addressed in the EIS.
- It was noted that the breeding bird study was unable to be fully completed due to site alteration (tilling of the land at address 14 Gideon Dr) in between breeding bird site visits. EIS to address this issue along with potential solutions.
- Any identified natural heritage features and areas boundaries to be staked and GPS located in the field with City of London staff.

Appendix C

Water Well Records

40 I/14F

UTM 17 Z 469810 E
5 R 4756470 N
Elev. 4 R 0817
Basin 212D

GROUND WATER BRANCH
JUL 10 1959
ONTARIO WATER RESOURCES COMMISSION

41 No. 474

The Ontario Water Resources Commission Act, 1957

WATER WELL RECORD

County or District Middlesex Township, Village, Town or City Delaware
Con. GORE Lot D
Date completed 15 (day) May (month) 59 (year)
Address KOMOKA

Casing and Screen Record

Inside diameter of casing 3 5/8
Total length of casing 67
Type of screen Slotted Casing
Length of screen 3 ft
Depth to top of screen 63
Diameter of finished hole 3 5/8

Pumping Test

Static level 52
Test-pumping rate 8 G.P.M.
Pumping level 52
Duration of test pumping 4 Hr
Water clear or cloudy at end of test Clear
Recommended pumping rate 8 G.P.M.
with pumping level of 52

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
Clay	0	15	53 63	11	Fresh
Sand	15	30			
Clay	30	52			
Sand	52	57			
gravel	57	66			

For what purpose(s) is the water to be used?
House

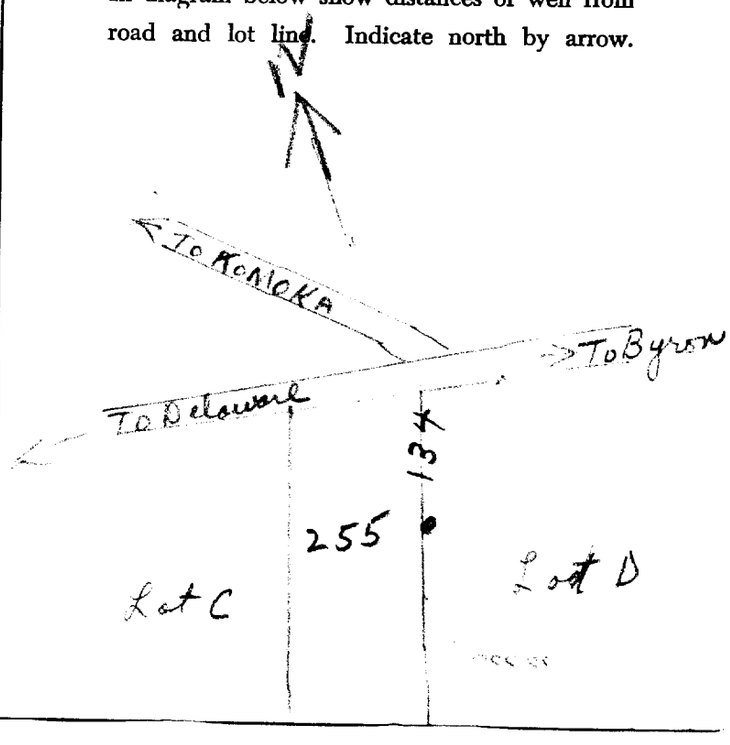
Is well on upland, in valley, or on hillside?
upland

Drilling Firm Sydney Earl
Address Kerwood

Licence Number 180
Name of Driller Arthur Lather
Address Bothwell, Ont
Date July 7.
Sydney Earl
(Signature of Licensed Drilling Contractor)

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Form 5
15M-58-4149

40 I/14F

UTM 17 Z 469730 E

5 R 4756420 N

Elev. 4 R 0870

Basin 40 22C

The Ontario Water Resources Commission Act, 1957

GROUND WATER BRANCH
41 No. 467
APR 3 1959
ONTARIO WATER RESOURCES COMMISSION

WATER WELL RECORD

County or District Middlesex Township, Village, Town or City Delaware

[redacted] Date completed 28 (day) Feb (month) 1959 (year)

[redacted] Glencoe. Ont.

Casing and Screen Record	
Inside diameter of casing	3 5/8
Total length of casing	67 feet
Type of screen	Slotted casing
Length of screen	4 ft
Depth to top of screen	62 feet
Diameter of finished hole	3 5/8

Pumping Test	
Static level	49
Test-pumping rate	12 G.P.M.
Pumping level	49
Duration of test pumping	8 hrs
Water clear or cloudy at end of test	Clear
Recommended pumping rate	12 G.P.M.
with pumping level of	49

Well Log / **Water Record**

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
Clay	0	36			
hardpan	36	50			
Sand (coarse)	50	55			
gravel (1/4 to 3/4 dia	55	66	55-66	17	fresh

For what purpose(s) is the water to be used?
House

Is well on upland, in valley, or on hillside?
hillside

Drilling Firm Sydney Earl

Address Kerwood Ont

Licence Number 180

Name of Driller Arthur Lather

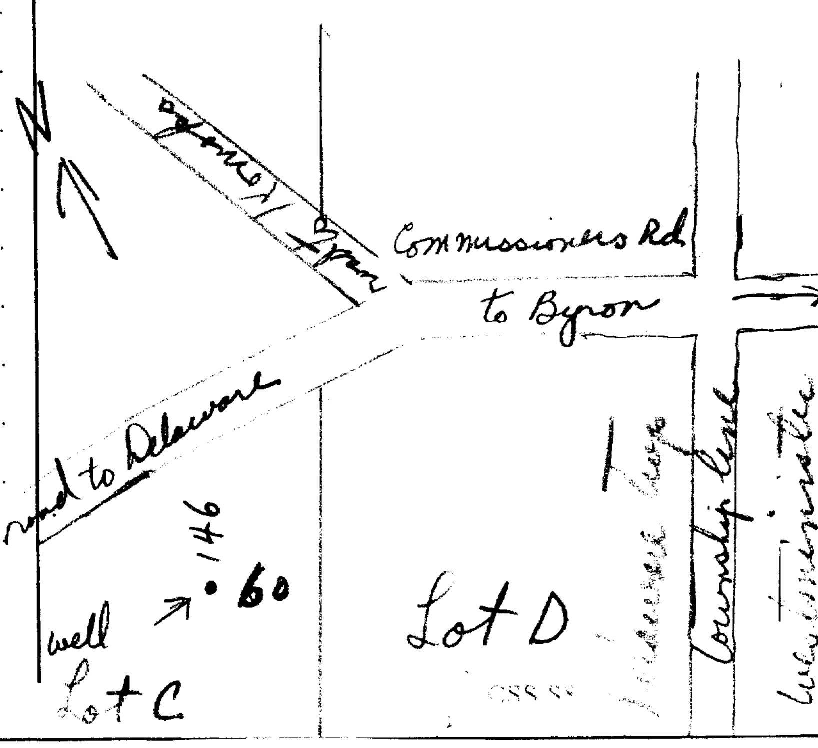
Address Bothwell Ont

Date Mar 28

Sydney Earl
(Signature of Licensed Drilling Contractor)

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Form 5
15M-58-4149

ONTARIO

MINISTRY OF THE ENVIRONMENT
The Ontario Water Resources Act

WATER WELL RECORD

40 1/14 F

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11

4106115

MUNICIP. 41004 CON. GORE

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
[redacted]		Gore Of Delaware	C

[redacted] .#3 London Ontario

DATE COMPLETED: DAY 21 MO. Nov YR. 72

NG 564210 RC. 4 ELEVATION 0870 RC. 6 BASIN CODE 23

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	TO
Black	Top Soil			0	1
Brown	Sandy Clay			1	19
Brown	Gravel			19	21
Grey	Sand			21	52
Grey	Gravel			52	56
				56	60

31 | 0001802 | 001960528 | 0021611 | 0052228 | 0056211

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0056	☒ FRESH ☐ SALTY ☐ SULPHUR ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	TO
05	☒ STEEL	1/4	0	0060

SCREEN

SIZE(S) OF OPENING (SLOT NO.) | DIAMETER INCHES | LENGTH FEET
MATERIAL AND TYPE | DEPTH TO TOP OF SCREEN FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: ☒ PUMP ☐ BAILER | PUMPING RATE 0004 GPM. | DURATION OF PUMPING 02 HOURS 00 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
045 FEET	052 FEET	052 FEET	052 FEET	052 FEET	052 FEET

WATER LEVELS DURING: ☒ PUMPING ☐ RECOVERY

IF FLOWING, GIVE RATE: GPM | PUMP INTAKE SET AT 55 FEET | WATER AT END OF TEST: ☒ CLEAR ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP | RECOMMENDED PUMP SETTING 055 FEET | RECOMMENDED PUMPING RATE 0004 GPM.

0006 GPM./FT. SPECIFIC CAPACITY

FINAL STATUS OF WELL

☒ WATER SUPPLY ☐ OBSERVATION WELL ☐ TEST HOLE ☐ RECHARGE WELL ☐ ABANDONED, INSUFFICIENT SUPPLY ☐ ABANDONED POOR QUALITY ☐ UNFINISHED

WATER USE 01

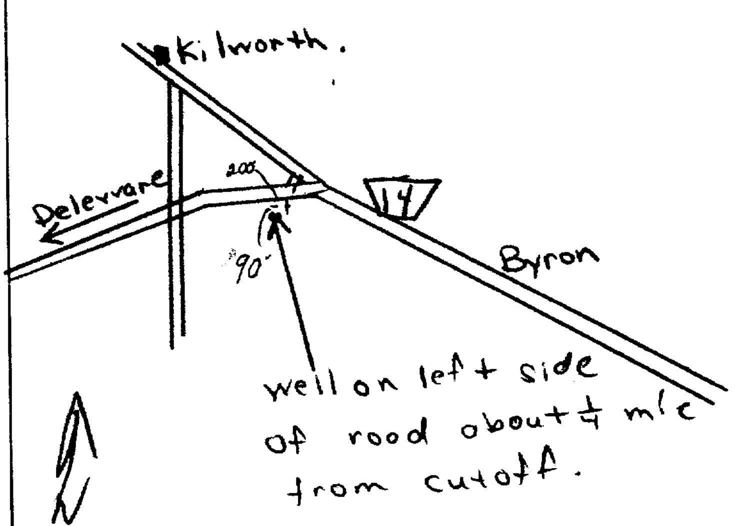
☒ DOMESTIC ☐ STOCK ☐ IRRIGATION ☐ INDUSTRIAL ☐ OTHER ☐ COMMERCIAL ☐ MUNICIPAL ☐ PUBLIC SUPPLY ☐ COOLING OR AIR CONDITIONING ☐ NOT USED

METHOD OF DRILLING

☐ CABLE TOOL ☒ ROTARY (CONVENTIONAL) ☐ ROTARY (REVERSE) ☐ ROTARY (AIR) ☐ AIR PERCUSSION ☐ BORING ☐ DIAMOND ☐ JETTING ☐ DRIVING

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



DRILLERS REMARKS:

CONTRACTOR

NAME OF WELL CONTRACTOR: Hadco Well Drilling And Diggign | LICENCE NUMBER: 2519
ADDRESS: P.O.Box 730 Elmira Ontario
NAME OF DRILLER OR BORER: R.L.Farnklin | LICENCE NUMBER:
SIGNATURE OF CONTRACTOR: [signature] | SUBMISSION DATE: DAY 27 MO. Nov YR. 72

OFFICE USE ONLY

DATA SOURCE 1 | CONTRACTOR 2519 | DATE RECEIVED 301172
DATE OF INSPECTION 28, 9, 73 | INSPECTOR
REMARKS: CSS.SS
P 7
WI 7

MINISTRY OF THE ENVIRONMENT COPY

FORM 7 07-091

Appendix D

ELC Information Sheets

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Barts Gideon Hts		POLYGON: 1	
SURVEYOR(S): WH	DATE:	TIME: start	
		finish	
UTMZ:	UTME:	UTMN:	

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☒ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☒ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

SITE	COVER
☐ OPEN WATER	☐ OPEN
☐ SHALLOW WATER	☐ SHRUB
☒ SURFICIAL DEP.	☒ TREED
☐ BEDROCK	

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	JUGnigr >> CELocci
2	SUB-CANOPY			
3	UNDERSTOREY	4	3	RUBocci > LONtata = VITripa
4	GRD. LAYER			

HT CODES: 1 = >25 m 2 = 10<HT 25 m 3 = 2<HT 10 m 4 = 1<HT 2 m 5 = 0.5<HT 1 m 6 = 0.2<HT 0.5 m 7 = HT<0.2 m

CVR CODES 0= NONE 1= 0% < CVR 10% 2= 10 < CVR 25% 3= 25 < CVR 60% 4= CVR > 60%

STAND COMPOSITION:	BA:

SIZE CLASS ANALYSIS:	< 10	10 - 24	25 - 50	> 50
STANDING SNAGS:	< 10	10 - 24	25 - 50	> 50
DEADFALL / LOGS:	< 10	10 - 24	25 - 50	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
		X			

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES / GLEY	g =	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

		ELC CODE
COMMUNITY CLASS:	CULTURAL	CU
COMMUNITY SERIES:	WOODLAND	CUW
ECOSITE:	MINERAL	CUW1
VEGETATION TYPE:		
INCLUSION		
COMPLEX		

Notes:

ELC
MANAGEMENT / DISTURBANCE

SITE: Gideon Hts.
POLYGON: 1
DATE: April 17
SURVEYOR(S): WH

DISTURBANCE EXTENT	0	1	2	3	SCORE †
TIME SINCE LOGGING	> 30 YRS	15 - 30 YRS	5 - 15 YRS	0 - 5 YEARS	3
INTENSITY OF LOGGING	NONE	FUEL WOOD	SELECTIVE	DIAMETER LIMIT	1
EXTENT OF LOGGING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
SUGAR BUSH OPERATIONS	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF OPERATIONS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
GAPS IN FOREST CANOPY	NONE	SMALL	INTERMEDIATE	LARGE	4
EXTENT OF GAPS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
LIVESTOCK (GRAZING)	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF LIVESTOCK	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ALIEN SPECIES	NONE	OCCASIONAL	ABUNDANT	DOMINANT	2
EXTENT OF ALIEN SPECIES	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
PLANTING (PLANTATION)	NONE	OCCASIONAL	ABUNDANT	DOMINANT	9
EXTENT OF PLANTING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
TRACKS AND TRAILS	NONE	FAINT TRAILS	WELL MARKED	TRACKS OR	4
EXTENT OF TRACKS/TRAILS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DUMPING (RUBBISH)	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF DUMPING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
EARTH DISPLACEMENT	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF DISPLACEMENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
RECREATIONAL USE	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF RECR. USE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
NOISE	NONE	SLIGHT	MODERATE	INTENSE	0
EXTENT OF NOISE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DISEASE/DEATH OF TREES	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF DISEASE / DEATH	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
WIND THROW (BLOW DOWN)	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF WIND THROW	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BROWSE (e.g. DEER)	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF BROWSE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BEAVER ACTIVITY	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF BEAVER	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FLOODING (pools & puddling)	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF FLOODING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FIRE	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF FIRE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ICE DAMAGE	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF ICE DAMAGE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
OTHER	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	

† INTENSITY x EXTENT = SCORE

ELC
PLANT SPECIES LIST

SITE: Gideon Rk
POLYGON: 11
DATE: Apr. 17
SURVEYOR(S): WA

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
JUGniga	D				
CELocci					
RUBocci					
VITrip					
RHUtyph					
LONtata					
THUocci					
CORalte					
DIPfull					
PYRcomm					
ALLpati					
MONfist					
THUocci					
ACEnegu					

SPECIES CODE	LAYER 1	2	3	4	COL.

Page ..... of .....

ELC
PLANT SPECIES LIST

SITE: Bart
POLYGON: 1
DATE:
SURVEYOR(S):

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.

SPECIES CODE	LAYER 1	2	3	4	COL.

Page ..... of .....

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Aarts		POLYGON: 2	
SURVEYOR(S): WH	DATE:	TIME: start	
		finish	
UTMZ:	UTME:	UTMN:	

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☒ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☒ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☒ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

SITE	COVER
☐ OPEN WATER	☒ OPEN
☐ SHALLOW WATER	☐ SHRUB
☒ SURFICIAL DEP.	☐ TREED
☐ BEDROCK	

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	JUGnigr
2	SUB-CANOPY	3	1	JUNvirg ≥ RHUtyph = CORrace
3	UNDERSTOREY			
4	GRD. LAYER			

HT CODES: 1 = >25 m 2 = 10<HT 25 m 3 = 2<HT 10 m 4 = 1<HT 2 m 5 = 0.5<HT 1 m 6 = 0.2<HT 0.5 m 7 = HT<0.2 m

CVR CODES 0= NONE 1= 0% < CVR 10% 2= 10 < CVR 25% 3= 25 < CVR 60% 4= CVR > 60%

STAND COMPOSITION:	BA:

SIZE CLASS ANALYSIS:	☐	< 10	☐	10 - 24	☐	25 - 50	☐	> 50
STANDING SNAGS:	☐	< 10	☐	10 - 24	☐	25 - 50	☐	> 50
DEADFALL / LOGS:	☐	< 10	☐	10 - 24	☐	25 - 50	☐	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	☒	PIONEER	☐	YOUNG	☐	MID-AGE	☐	MATURE	☐	OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES / GLEY	g =	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

		ELC CODE
COMMUNITY CLASS:	CULTURAL	CU
COMMUNITY SERIES:	MEADOW	CUM
ECOSITE:	MINERAL	CUM1
VEGETATION TYPE:	DRY-MOIST OLD FIELD MEADOW TYPE	CUM1-1
INCLUSION		
COMPLEX		

Notes:

ELC
MANAGEMENT / DISTURBANCE

SITE: Aarts
POLYGON: 2
DATE: April 17, 2018
SURVEYOR(S): WH

DISTURBANCE EXTENT	0	1	2	3	SCORE †
TIME SINCE LOGGING	> 30 YRS	15 - 30 YRS	5 - 15 YRS	0 - 5 YEARS	0
INTENSITY OF LOGGING	NONE	FUEL WOOD	SELECTIVE	DIAMETER LIMIT	0
EXTENT OF LOGGING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
SUGAR BUSH OPERATIONS	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF OPERATIONS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
GAPS IN FOREST CANOPY	NONE	SMALL	INTERMEDIATE	LARGE	0
EXTENT OF GAPS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
LIVESTOCK (GRAZING)	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF LIVESTOCK	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ALIEN SPECIES	NONE	OCCASIONAL	ABUNDANT	DOMINANT	2
EXTENT OF ALIEN SPECIES	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
PLANTING (PLANTATION)	NONE	OCCASIONAL	ABUNDANT	DOMINANT	0
EXTENT OF PLANTING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
TRACKS AND TRAILS	NONE	FAINT TRAILS	WELL MARKED	TRACKS OR	0
EXTENT OF TRACKS/TRAILS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DUMPING (RUBBISH)	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF DUMPING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
EARTH DISPLACEMENT	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF DISPLACEMENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
RECREATIONAL USE	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF RECR. USE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
NOISE	NONE	SLIGHT	MODERATE	INTENSE	0
EXTENT OF NOISE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DISEASE/DEATH OF TREES	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF DISEASE / DEATH	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
WIND THROW (BLOW DOWN)	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF WIND THROW	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BROWSE (e.g. DEER)	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF BROWSE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BEAVER ACTIVITY	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF BEAVER	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FLOODING (pools & puddling)	NONE	~~LIGHT~~	MODERATE	HEAVY	1
EXTENT OF FLOODING	NONE	~~LOCAL~~	WIDESPREAD	EXTENSIVE	
FIRE	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF FIRE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ICE DAMAGE	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF ICE DAMAGE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
OTHER	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	

† INTENSITY x EXTENT = SCORE

ELC
PLANT SPECIES LIST

SITE: Arv ts
POLYGON: 2
DATE: Apr 17
SURVEYOR(S): WH

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COL.
JUGnigr					
ACEnegu					
RUBocci					
JUNvirg					
CORfoze					
MONfist					
TARoffi					
LONtata					
ALLpeti					
PARinse					
CRA					
CRA					
TILamer					
CORalte					
IRI					
DAUcarr					
ELEumbe					
ACHmill					
MONfist					
RHUtyph					
ERYamer				R	
VITripa					
BARvulg					

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COL.

ELC
PLANT SPECIES LIST

SITE: Aarts
POLYGON: 2
DATE:
SURVEYOR(S):

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COL.

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COL.

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Aaurts		POLYGON: 3	
SURVEYOR(S): WH	DATE:	TIME: start	
		finish	
UTMZ:	UTME:	UTMN:	

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☑ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☑ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☑ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☑ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☑ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☑ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

SITE	COVER
☐ OPEN WATER	☐ OPEN
☐ SHALLOW WATER	☑ SHRUB
☑ SURFICIAL DEP.	☐ TREED
☐ BEDROCK	

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	3	RHU typh > JUN virg
2	SUB-CANOPY			
3	UNDERSTOREY	5	3	RUBorri = CORrace
4	GRD. LAYER			

HT CODES: 1 = >25 m 2 = 10<HT 25 m 3 = 2<HT 10 m 4 = 1<HT 2 m 5 = 0.5<HT 1 m 6 = 0.2<HT 0.5 m 7 = HT<0.2 m

CVR CODES 0= NONE 1= 0% < CVR 10% 2= 10 < CVR 25% 3= 25 < CVR 60% 4= CVR > 60%

STAND COMPOSITION:	BA:

		< 10		10 - 24		25 - 50		> 50
SIZE CLASS ANALYSIS:								
STANDING SNAGS:								
DEADFALL / LOGS:								

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH
	X									

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES / GLEY	g =	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

		ELC CODE
COMMUNITY CLASS:	CULTURAL	CU
COMMUNITY SERIES:	THICKET	CUT
ECOSITE:	MINERAL	CUT1
VEGETATION TYPE:	SUMAC CULTURAL THICKET TYPE	CUT1-1
INCLUSION		
COMPLEX		

Notes:

ELC
MANAGEMENT / DISTURBANCE

SITE: Aaurts
POLYGON: 3
DATE:
SURVEYOR(S):

DISTURBANCE EXTENT	0	1	2	3	SCORE †
TIME SINCE LOGGING	> 30 YRS	15 - 30 YRS	5 - 15 YRS	0 - 5 YEARS	
INTENSITY OF LOGGING	NONE	FUEL WOOD	SELECTIVE	DIAMETER LIMIT	
EXTENT OF LOGGING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
SUGAR BUSH OPERATIONS	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF OPERATIONS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
GAPS IN FOREST CANOPY	NONE	SMALL	INTERMEDIATE	LARGE	
EXTENT OF GAPS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
LIVESTOCK (GRAZING)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF LIVESTOCK	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ALIEN SPECIES	NONE	OCCASIONAL	ABUNDANT	DOMINANT	
EXTENT OF ALIEN SPECIES	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
PLANTING (PLANTATION)	NONE	OCCASIONAL	ABUNDANT	DOMINANT	
EXTENT OF PLANTING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
TRACKS AND TRAILS	NONE	FAINT TRAILS	WELL MARKED	TRACKS OR	
EXTENT OF TRACKS/TRAILS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DUMPING (RUBBISH)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DUMPING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
EARTH DISPLACEMENT	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DISPLACEMENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
RECREATIONAL USE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF RECR. USE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
NOISE	NONE	SLIGHT	MODERATE	INTENSE	
EXTENT OF NOISE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DISEASE/DEATH OF TREES	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DISEASE / DEATH	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
WIND THROW (BLOW DOWN)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF WIND THROW	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BROWSE (e.g. DEER)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF BROWSE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BEAVER ACTIVITY	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF BEAVER	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FLOODING (pools & puddling)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF FLOODING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FIRE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF FIRE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ICE DAMAGE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF ICE DAMAGE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
OTHER	NONE	LIGHT	MODERATE	HEAVY	
EXTENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	

† INTENSITY x EXTENT = SCORE

ELC
PLANT SPECIES LIST

SITE: Parks
POLYGON: 3
DATE:
SURVEYOR(S):

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER				COL.
	1	2	3	4	
RHUtyph					
RUBocci					
CORrace					
DIPsylv					
RUBidae					
BROiner					
CORseri					
BARvulg					
VERthap					
LONtata					
CRA					
ALLpeti					
JUGnigr					
VITripa					
ACEsasa					dead
ACEplat					
DIPfull					
MALcoro					
SYRvulg					
JUNvir					
RHAcath					
THUocci					
POPtrem					
ACErubr					

SPECIES CODE	LAYER				COL.
	1	2	3	4	

ELC
PLANT SPECIES LIST

SITE: Parks
POLYGON: 3
DATE:
SURVEYOR(S):

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER				COL.
	1	2	3	4	

SPECIES CODE	LAYER				COL.
	1	2	3	4	

Appendix D1

Agricultural Agreement Letter – 14 Gideon Drive and 2012 Oxford Street West

ORANGE ROCK
DEVELOPMENTS

3003 Page Street
London, Ontario
N5V 4J1

September 28, 2020

Attn: Dave Hayman, M.Sc.

RE: 14 Gideon Drive and 2012 Oxford Street West

This letter has been written to advise MTE Consultants Inc. that 2515060 Ontario Inc. purchased the above referenced properties on April 29 2016 Previous agreements in place for renting the land for crops and livestock were honored until new agreements commenced in the spring/summer of 2018. At this time and consistent with permitted uses of UR1 zoned lands the small area of pasture for livestock was tilled and the workable area expanded for row crops on a rotational schedule that continues today.

We trust this adequately describes the use of land since our ownership.

Regards

Jonathan Aarts
Partner
2515060 Ontario Inc.

Appendix E

Candidate Significant Wildlife Habitat Table

ELC's: CUW-1; CUM-1; CUT-1

Seasonal Concentration of Animals

Wildlife Habitat	ELC Codes Triggers	Additional Habitat Criteria	Candidate SWH
Waterfowl Stopover and Staging Areas (Terrestrial)	CUM1, CUT1	- no fields with sheet water during spring present	No
Waterfowl Stopover and Staging Areas (Aquatic)	none present	- none present	No
Shorebird Migratory Stopover Area	none present	- none present	No
Raptor Wintering Area	CUW1,CUT1	- combination of forest and meadow is not large enough (need to be >20ha); field is not idle/fallow, it is active agriculture	No
Bat Hibernacula	none present	- none present	No
Bat Maternity Colonies	none present	- none present	No
Turtle Wintering Areas	none present	- none present	No
Reptile Hibernaculum	all other than really wet	- no rock piles, stone fences, crumbling foundations, or rock crevices, no active animal burrows	No
Colonially-Nesting Bird Breeding Habitat (Bank / Cliff)	CUM1	- no steep slopes of exposed banks or cliff faces present	No
Colonially-Nesting Bird Breeding Habitat (Trees/Shrubs)	none present	- nests in live or dead standing trees	No
Colonially-Nesting Bird Breeding Habitat (Ground)	CUM1, CUT1	- no rocky islands or peninsulas present or watercourses in open fields with scatted trees present	No
Migratory Butterfly Stopover Areas	CUM1, CUT1	- combination of field and forest present, however less than the required 10ha in size; not located with 5km of Lake Erie	No
Land Bird Migratory Stopover Areas	none present	- none present	No
Deer Winter Congregation Areas	none present	- none present	No

Rare Vegetation Communities

Wildlife Habitat	ELC Codes Triggers	Additional Habitat Criteria	Candidate SWH
Cliffs and Talus Slopes	not present		No
Sand Barren	not present		No
Alvar	not present		No
Old Growth Forest	not present		No
Savannah	not present		No
Tallgrass Prairie	not present		No
Other Rare Vegetation	not present		No

Specialized Habitats of Wildlife considered SWH

Wildlife Habitat	ELC Codes Triggers	Additional Habitat Criteria	Candidate SWH
Waterfowl Nesting Area	none present	-none present	No
Bald Eagle and Osprey Nesting, Foraging, Perching	none present	- no stick nests observed	No
Woodland Raptor Nesting Habitat	none present	-none of the treed communities are >30ha, or with >4ha interior habitat	No
Turtle Nesting Areas	none present	- no exposed mineral soil adjacent to wetlands	No
Springs and Seeps	none present	- no headwater forested areas present	No
Amphibian Breeding Habitat (Woodland)	none present	- no wetlands adjacent to wooded areas	No
Amphibian Breeding Habitat (Wetlands)	none present	-no communities present	No
Woodland Area-Sensitive Bird Breeding Habitat	none present	-habitats where interior forest breeding birds are breeding; large mature (>60yrs old) forest stands or woodlots >30ha	No

Habitats of Species of Conservation Concern considered SWH

Wildlife Habitat	ELC Codes Triggers	Additional Habitat Criteria	Candidate SWH
Marsh Breeding Bird Habitat	none present	-no wetland habitat present within Subject Lands	No
Open Country Bird Breeding Habitat	none present	- natural and cultural fields >30ha are not present	No
Shrub/Early Successional Bird Breeding Habitat	CUW1, CUT1	- no large fields succeeding to shrub and thicket habitats > 10ha in size	No
Terrestrial Crayfish	none present	-none present	No
Special Concern and Rare Wildlife Species (NHIC and MNRF pre-consultation)		- Eastern Wood-pewee breeding habitat (Community 1)	**Confirmed**

Wildlife Habitat	ELC Codes Triggers*	Additional Habitat Criteria	Candidate SWH
Amphibian Movement Corridors	based on identifying SWH	-no amphibian breeding habitat present.	No

Wildlife Habitat	Ecosites	Habitat Criteria and Information	Candidate SWH
Bat Migratory Stopover Area	no triggers	- site is not near Long Point	No

Appendix F

MNRF Correspondence

Laura McLennan

From: ESA-Aylmer (MNRF) <ESA.Aylmer@ontario.ca>
Sent: Thursday, January 31, 2019 12:11 PM
To: Laura McLennan
Cc: Erin Boynton; Dave Hayman
Subject: RE: Stage 1 Information Request - Aarts Gideon

Hello,

Thank you for submitting the Stage 1 information request for the proposed residential development at 14 Gideon Drive and 2012 Oxford Street in London.

The *Endangered* Species Act, 2007 (ESA) provides both species protection (under section 9) and habitat protection (under section 10) to species listed as endangered or threatened on the Species at Risk in Ontario (SARO) List. There are **no known occurrences** of Species at Risk on the property.

There are no Provincially or Regionally Significant Earth or Life Science ANSI's (Areas of Natural and Scientific Interest) within or adjacent to the above noted property.

There are no known evaluated wetlands within or adjacent to the above-noted property.

Since there are no Species at Risk or Species at Risk being impacted by this project, no further authorization or technical advice is required from the Ministry of Natural Resources and Forestry. As a result this email serves as an official acknowledgement of that fact.

Please let me know if there are any other questions.

Thanks,

Jason Webb
Management Biologist
Ministry of Natural Resources and Forestry
Aylmer District
(519) 773-4744
Jason.webb@ontario.ca

From: Laura McLennan [mailto:lmclennan@biologic.ca]
Sent: October-30-18 3:43 PM
To: ESA-Aylmer (MNRF) <ESA.Aylmer@ontario.ca>
Cc: Erin Boynton <eboynton@biologic.ca>; Dave Hayman <dhayman@biologic.ca>
Subject: Stage 1 Information Request - Aarts Gideon

Hello ESA,

Please find attached a Stage 1 Information Request for a proposed residential development at 14 Gideon Drive and 2012 Oxford Street in London.

A confirmation of receipt would be appreciated to confirm that the document is in the queue for review.

The attached documents are submitted as part of our discussions with MNRF with respect to the Endangered Species Act. Until a final decision has been rendered with respect to this application, it is our expectation these documents will be treated as Personal and Confidential.

Thanks,

Laura McLennan
BioLogic Incorporated
110 Riverside Dr, Suite 201
London, ON N6H 4S5

Tel: 519-434-1516
Fax: 519-434-0575

Appendix G

Floral Inventory

			Floral Inventory								
1	2	3	**Scientific Name**	**Common Name**	**CW**	**GRank**	**COSEWIC**	**Nrank**	**SARO**	**SRank**	**MD**
X	X	X	*Acer negundo*	Manitoba Maple	0	G5		N5		S5	C
	X	X	*Achillea millefolium*	Common Yarrow	3	G5		N5		SE	
X			*Agrostemma githago var. githago*	Common Corncockle	3	GNRTNR		NNA		SE3	
X			*Ailanthus altissima*	Tree-of-heaven	5	GNR		NNA		SE5	IR
X	X	X	*Alliaria petiolata*	Garlic Mustard	0	GNR		NNA		SE5	IC
	X	X	*Apocynum cannabinum*	Hemp Dogbane	0	G5		N5		S5	
X	X	X	*Asclepias syriaca*	Common Milkweed	5	G5		N5		S5	C
	X	X	*Barbarea vulgaris*	Bitter Wintercress	0	GNR		NNA		SE5	IC
X			*Bromus inermis*	Smooth Brome	5	G5		NNA		SE5	IC
	X		*Carex gracillima*	Graceful Sedge	3	G5		N5		S5	C
	X		*Carex gynandra*	Nodding Sedge	-5	G5		N5		S5	
	X		*Carex normalis*	Larger Straw Sedge	-3	G5		NNR		S4	R
X			*Carex sparganioides*	Burreed Sedge	3	G5		N5		S4S5	U
	X		*Carex stipata*	Awl-fruited Sedge	-5	G5		N5		S5	C
	X		*Carex vulpinoidea*	Fox Sedge	-5	G5		N5		S5	C
X			*Celtis occidentalis*	Common Hackberry	0	G5		N4		S4	X
X			*Circaea canadensis*	Broad-leaved Enchanter's Nightshade	3	G5		N5		S5	X
	X	X	*Convolvulus arvensis*	Field Bindweed	5	GNR		NNA		SE5	IX
X	X		*Cornus alternifolia*	Alternate-leaved Dogwood	3	G5		N5		S5	X
	X	X	*Cornus racemosa*	Gray Dogwood	0	G5		N5		S5	X
	X		*Crataegus punctata*	Dotted Hawthorn	5	G5		N5		S5	C
X	X	X	*Dactylis glomerata*	Orchard Grass	3	GNR		NNA		SE5	IC
	X	X	*Daucus carota*	Wild Carrot	5	GNR		NNA		SE5	IC
X			*Dipsacus fullonum*	Common Teasel	3	GNR		NNA		SE5	IC
	X	X	*Elaeagnus umbellata*	Autumn Olive	3	GNR		NNA		SE3	IR
X			*Elymus repens*	Creeping Wildrye	3	GNR		NNA		SE5	IC
	X	X	*Erigeron annuus*	Annual Fleabane	3	G5		N5		S5	C
X			*Erigeron philadelphicus*	Philadelphia Fleabane	-3	G5		N5		S5	C
	X		*Erythronium americanum*	Yellow Trout-lily	5	G5		N5		S5	X
X			*Geum aleppicum*	Yellow Avens	0	G5		N5		S5	X
X			*Geum canadense*	White Avens	0	G5		N5		S5	X
	X		*Geum laciniatum*	Rough Avens	-3	G5		N5		S4	X
	X		*Hesperis matronalis*	Dame's Rocket	3	G4G5		NNA		SE5	IX
X	X	X	*Hypericum perforatum*	Common St. John's-wort	5	GNR		NNA		SE5	IC
	X		*Ipomoea purpurea*	Common Morning Glory	3	GNR		NNA		SE2	IR
	X		*Iris pseudacorus*	Yellow Iris	-5	GNR		NNA		SE4	IR
X	X	X	*Juglans nigra*	Black Walnut	3	G5		N4		S4?	X
	X	X	*Juncus tenuis*	Path Rush	0	G5		N5		S5	X
	X	X	*Juniperus virginiana*	Eastern Red Cedar	3	G5		N5		S5	X
X			*Linaria vulgaris*	Butter-and-eggs	5	GNR		NNA		SE5	IC

			Floral Inventory								
1	2	3	**Scientific Name**	**Common Name**	**CW**	**GRank**	**COSEWIC**	**Nrank**	**SARO**	**SRank**	**MD**
X	X	X	*Lonicera tatarica*	Tartarian Honeysuckle	3	GNR		NNA		SE5	IX
X	X	X	*Monarda fistulosa*	Wild Bergamot	3	G5		N5		S5	
X	X	X	*Parthenocissus vitacea*	Thicket Creeper	3	G5		N5		S5	X
	X		*Phalaris arundinacea*	Reed Canary Grass	-3	G5		N5		S5	X
X			*Pyrus communis*	Common Pear	5	G5		NNA		SE4	IX
X	X	X	*Rhus typhina*	Staghorn Sumac	3	G5		N5		S5	C
X	X	X	*Rubus occidentalis*	Black Raspberry	5	G5		N5		S5	C
X	X	X	*Solidago canadensis*	Canada Goldenrod	3	G5		N5		S5	
	X		*Solidago nemoralis*	Gray-stemmed Goldenrod	5	G5		N5		S5	
	X	X	*Sonchus arvensis*	Field Sow-thistle	3	GNR		NNA		SE5	IX
	X	X	*Stellaria graminea*	Grass-leaved Starwort	5	GNR		NNA		SE5	IX
X	X	X	*Symphyotrichum ericoides*	White Heath Aster	3	G5		N5		S5	
X			*Symphyotrichum lanceolatum var. interior*	Interior White Aster	-3	G5T5		NNR		S4S5	
X	X	X	*Symphyotrichum novae-angliae*	New England Aster	-3	G5		N5		S5	C
X	X	X	*Symphyotrichum pilosum*	White Heath Aster	3	G5		N5		S5	
	X	X	*Taraxacum officinale*	Common Dandelion	3	G5		N5		SE5	IC
X			*Thuja occidentalis*	Eastern White Cedar	-3	G5		N5		S5	X
	X		*Tilia americana*	American Basswood	3	G5		N5		S5	C
	X		*Viburnum opulus*	Cranberry Viburnum	-3	G5		N5		S5	
X	X	X	*Vitis riparia*	Riverbank Grape	0	G5		N5		S5	C

Community 1

Floristic Analysis	
Total Spp.	32
Native	21
% Native	65.63
Introd.	11
% Introd.	34.38
Coefficient of Conservatism	
SUM CC	59
Mean CC (Natives)	2.81
Mean CC (All Spp.)	1.84
FQI	
FQI (Natives)	12.87
FQI (All Spp.)	10.43
Mean Coefficient of Wetness	
Natives	1.33
All Species	2.13

Community 2

Floristic Analysis	
Total Spp.	45
Native	30
% Native	66.66667
Introd.	15
% Introd.	33.33333
Coefficient of Conservatism	
SUM CC	87
Mean CC (Natives)	2.9
Mean CC (All Spp.)	1.933333
FQI	
FQI (Natives)	15.88395
FQI (All Spp.)	12.96919
Mean Coefficient of Wetness	
Natives	1.033333
All Species	1.555556

Community 3

Floristic Analysis	
Total Spp.	29
Native	17
% Native	58.62069
Introd.	12
% Introd.	41.37931
Coefficient of Conservatism	
SUM CC	34
Mean CC (Natives)	2
Mean CC (All Spp.)	1.172414
FQI	
FQI (Natives)	8.246211
FQI (All Spp.)	6.313641
Mean Coefficient of Wetness	
Natives	2
All Species	2.482759

Mean Coefficient of Conservatism

10.00	
9.50	
9.00	
8.50	
8.00	
7.50	
7.00	
6.50	
6.00	
5.50	>4.5 remnant has natural area potential (relatively intact natural area with high floristic quality)
5.00	
4.50	
4.00	>3.5 Sufficient floristic quality to be of remnant natural quality
3.50	
3.00	
2.50	
2.00	
1.50	
1.00	
0.50	
0.00	

Floristic Quality Index (FQI)

100.00	
95.00	
90.00	
85.00	
80.00	
75.00	
70.00	
65.00	
60.00	>50 Extremely rare and represent a significant component of Ontario's native biodiversity and natural landscapes
55.00	
50.00	
45.00	>35 Possess sufficient conservatism and richness to be floristically important from a Provincial perspective
40.00	
35.00	
30.00	
25.00	
20.00	<20 Minimal significance from a natural quality perspective
15.00	
10.00	
5.00	
0.00	

Mean Coefficient of Wetness

5.0	***Strong***
4.5	
4.0	
3.5	
3.0	Pedominance of upland species
2.5	
2.0	
1.5	
1.0	
0.5	*Slight*
0.0	
-0.5	*Slight*
-1.0	
-1.5	
-2.0	
-2.5	Predominance of wetland species
-3.0	
-3.5	
-4.0	
-4.5	
-5.0	***Strong***

Appendix H

Breeding Bird Study

AVIFAUNAL SURVEY INFORMATION SUMMARY SHEET

Project: Aarts _ Gideon Heights
Collector(s): W. Huys, Erin Boynton

	Date	Start	Finish	Weather
Visit 1	5-Jun-18	5:15 a.m.	6:30 a.m.	11°C clear, still
Visit 2	20-Jun-18	9:00 a.m.	10:00 a.m.	18°C overcast, still, cool

Species Code	Species Name	Visit 1		Visit 2		S Rank	ESA Statu	PIF Status	Community	Notes	
		Evidence Code	No.	Evidence Code	No.						
MODO	Mourning Dove			OB	1	S5			2		92
DOWO	Downy Woodpecker			OB	1	S5			2		108
EAWP	Eastern Wood-Pewee	FY	1			S4	-	RC	1		112
EAPH	Eastern Phoebe	VO	1			S5			1		117
EAKI	Eastern Kingbird	OB	1			S4		RC	2		119
WAVI	Warbling Vireo	VO	1	SM	1	S5			1, 2		123
BCCH	Black-capped Chickadee	VO	1			S5	-		1		134
AMRO	American Robin	VO, FY	5	FY	7	S5			1, 2		152
YWAR	Yellow Warbler	OB	1	SM	1	S5			1		163
CHSP	Chipping Sparrow			P	2	S5			2		192
FISP	Field Sparrow	OB	1	SM	1	S4		RC	2		193
SOSP	Song Sparrow	P	3	SM, P	7	S5			1, 2		198
NOCA	Northern Cardinal			T	2	S5			1		203
INBU	Indigo Bunting	VO	1	T, P	3	S4			1, 2		205
RWBL	Red-winged Blackbird	OB, FY	6			S4			1, 2		207
COGR	Common Grackle	OB	2	VO	1	S5			2		210
BHCO	Brown-headed Cowbird	VO, P	3	P	3	S4			1, 2		211
BAOR	Baltimore Oriole			FY	3	S4		RC,RS	2		213
AMGO	American Goldfinch	OB	1	P, OB	5	S5			1, 2		215

Evidence Codes:

Breeding Bird - Possible

SH=Suitable Habitat SM=Singing Male

Breeding Bird - Probable

T=Territory A=Anxiety Behaviour D=Display N=Nest Building P=Pair V=Visiting Nest

Breeding Bird - Confirmed

DD=Distraction NE=Eggs AE=Nest Entry NU=Nest Used NY=Nest Young FY=Fledged Young FS=Food/Faecal Sack

Other Wildlife Evidence

OB=Observed DP=Distinctive Parts TK=Tracks VO=Vocalization HO=House/Den FE=Feeding Evidence CA=Carcass
Fy=Eggs or Young SC=Scat SI=Other Signs (specify)

Appendix I

Amphibian Monitoring

AMPHIBIAN BREEDING SURVEY INFORMATION FIELD SHEET

BioLogic

Project: Aarts - Gideon Heights Page 1 of 1
Station Name: J Watercourse Name:
Darinage Sys.: GPS Coordinates:

Visit 1 Date: April 21, 2018 Start: 10:43 End: 10:54
Weather: clear, still
Water °C: — Wind: 0 Noise: 1 Today- Rain: no Max °C: 12°
Air °C: 4° Cloud%: 0 Yesterday- Rain: no Max °C: 9°
Control Site: Y/N Were Frogs Calling: Y/N Where: TOPPING Collector(s): MH

Amphibian Data:

Field Note Community:		1		2													
ELC Community:																	
Species	Season	CC	#	CC	#	CC	#	CC	#	CC	#	CC	#	CC	#	CC	#
Wood Frog	e. spring	—	—	—	—												
Spring Peeper	e. spring	—	—	—	—												
Western Chorus Frog	e. spring	—	—	—	—												
Boreal Chorus Frog	e. spring	—	—	—	—												
American Toad	spring	—	—	—	—												
Northern Leopard Frog	spring	—	—	—	—												
Pickerel Frog	spring	—	—	—	—												
Gray Treefrog	spring	—	—	—	—												
Fowler's Toad	spring	—	—	—	—												
Mink Frog	summer	—	—	—	—												
Green Frog	summer	—	—	—	—												
Bullfrog	summer	—	—	—	—												

Visit 2 Date: Start: End:
Weather:
Water °C: Wind: Noise: Today- Rain: Max °C:
Air °C: Cloud%: Yesterday- Rain: Max °C:
Control Site: Y/N Were Frogs Calling: Y/N Where: Collector(s):

Amphibian Data:

Species	Season	CC	#	CC	#	CC	#	CC	#	CC	#	CC	#	CC	#	CC	#
Wood Frog	e. spring																
Spring Peeper	e. spring																
Western Chorus Frog	e. spring																
Boreal Chorus Frog	e. spring																
American Toad	spring																
Northern Leopard Frog	spring																
Pickerel Frog	spring																
Gray Treefrog	spring																
Fowler's Toad	spring																
Mink Frog	summer																
Green Frog	summer																
Bullfrog	summer																

Visit 3 Date: Start: End:
Weather:
Water °C: Wind: Noise: Today- Rain: Max °C:
Air °C: Cloud%: Yesterday- Rain: Max °C:
Control Site: Y/N Were Frogs Calling: Y/N Where: Collector(s):

Amphibian Data:

Species	Season	CC	#	CC	#	CC	#	CC	#	CC	#	CC	#	CC	#	CC	#
Wood Frog	e. spring																
Spring Peeper	e. spring																
Western Chorus Frog	e. spring																
Boreal Chorus Frog	e. spring																
American Toad	spring																
Northern Leopard Frog	spring																
Pickerel Frog	spring																
Gray Treefrog	spring																
Fowler's Toad	spring																
Mink Frog	summer																
Green Frog	summer																
Bullfrog	summer																

Appendix J

Breeding Bird Atlas Squares – Eastern Wood-pewee

Atlas of the BREEDING BIRDS OF ONTARIO

Select a species and the type of map to display. The maps may take a few moments to appear.

Eastern Wood-Pewee ▼ | 2nd atlas - br. evidence Atlas ▼ | Previous | Next | Switch